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MADE AT THE

GOVERNMENT OBSERVATORY, BOMBAY,

1900 AND 1901.

WITH AN APPENDIX.

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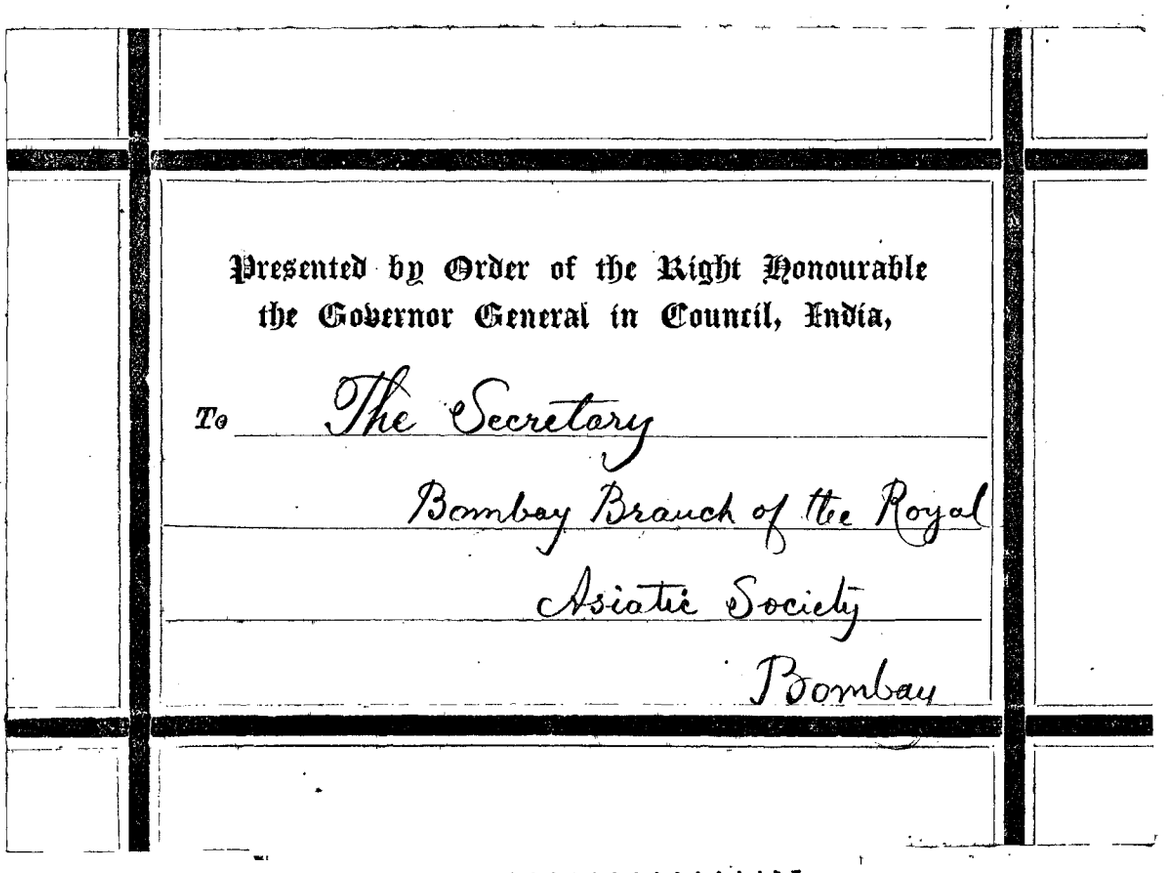
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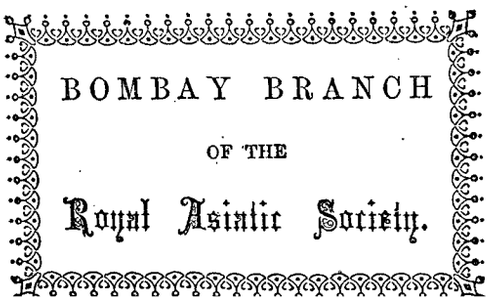

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WITH AN APPENDIX

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MADE AT THE

GOVERNMENT OBSERVATORY, BOMBAY,

IN THE YEARS 1900 AND 1901

UNDER THE DIRECTION OF

N. A. F. MOOS, Esq., B.Sc. (Edin.), F.R.S.E.,

WITH AN APPENDIX.

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INTRODUCTION

TO THE

METEOROLOGICAL, SEISMOLOGICAL AND MAGNETICAL OBSERVATIONS, 1900 AND 1901.

The present volume—the thirty-eighth of its kind—extends the record of Magnetical and Meteorological Observations at the Government Observatory, Bombay, to a period of fifty-six years.

2. *Local Situation of the Observatory, &c.*—The Observatory is located at the extreme end of a narrow and somewhat rising strip of land called Colába, running about two miles south-west from the Fort of Bombay, and separating the Harbour from Back Bay. The mean level of the Observatory compound is 32 feet above the mean level of the sea at Colába. Basaltic traps with their intertrappean beds, which constitute more or less the basis of formation of the whole surrounding coast, crop up at various places through the red sandy soil characteristic of the hills in the vicinity. The nearest elevated ground is Malabár Hill lying northwards at a distance of about 4 miles on the opposite side of the Bay, while that which subtends the largest vertical angle —less than 1° 7′—as seen from this Observatory, is the southern hill of the island of Karanja situated east-south-east at a distance of about 8 miles across the Harbour.

The exact geographical position of the Observatory is

Latitude 18° 53′ 45″ North.
Longitude 72° 48′ 56″ East.

The buildings concerned with the production of the observations recorded herein are, (1) the Astronomical Observatory and the Anemometer Tower, with a western wing, the greater part of which serves as a computing room, whilst the remainder is partitioned off for a photographic operating room; (2) the Magnetical Observatory with the adjoining Electrometer Tower; (3) the underground Magnetograph Room; (4) the Thermograph Shed, enclosing the thermograph room, to which may be added the old thermometer shed; and (5) the Seismograph Buildings.

3. *Directorship of the Observatory.*—The observations of the years 1900 and 1901 were taken under the direction of Mr. N. A. F. Moos, B.Sc. (Edin.), F.R.S.E.

4. *Personal establishment and arrangement, 1900 and 1901.*—The Assistants in the Magnetical and Meteorological Department were on 1st January 1900 as follow:—

First Assistant	... Vinayak Narayan Nene.
Second Assistant	... Ganesh Sadashiv Joshi.
First Observer	... Narayan Sakharam Kelkar.
Second Observer	... Shitaram Vithal Bendarkar.
Third Observer	... Lakshman Balvant Chaphekar.

Computer	... Gopal Pandurang Sabnis.
Candidates	... Sakharam Balaji Bapat. Ganesh Raghunath Fagre.

ASTRONOMICAL DEPARTMENT.

First Assistant	... Parshuram Lakshman Datar.
Second Assistant	... Damodar Vaman Sathaye.

In consequence of the death of Mr. Lakshman Balvant Chaphekar on 5th April 1900 and the retirement of Mr. Parshuram Lakshman Datar from 11th April 1900, the establishment on and after 1st July 1900 was as follows :—

MAGNETICAL AND METEOROLOGICAL DEPARTMENT.

First Assistant	... Vinayak Narayan Nene.
Second Assistant	... Ganesh Sadashiv Joshi.
First Observer	... Shitaram Vithal Bendarkar.
Second Observer	... Gopal Pandurang Sabnis.
Third Observer	... Sakharam Balaji Bapat.
Computer	... Vishnu Balkrishna Achwal.
Candidates	... Pandurang Vasudev Khambete *from 14th August* to 5th December 1900. Vithal Ramkrishna Dabke from 18th October 1900 to 22nd July 1901. Padmakar Waman Sirdeshpande from 12th August to 31st December 1901.

ASTRONOMICAL DEPARTMENT.

First Assistant	... Damodar Vaman Sathaye.
Second Assistant	... Narayan Sakharam Kelkar.

5. The duties of the establishment are distributed in the following manner :—

The First Assistants are charged with the determination of values of instrumental constants and the more delicate observations requiring skill and long experience, and they generally control and superintend the whole of the work of their respective departments.

Upon the Second Assistant, Magnetical Department, devolve mostly the photographic operations. He is also responsible for all the photographic instruments which require constant and careful attention. The anemograph and meteorological work generally are attended to by the Second Assistant, Astronomical Department. The routine magnetical and meteorological observations are in general made by the observers and the computer, who are made to take up the work in rotation. Amongst the duties of the observers are included the tabulation of all photograms, calculation and reduction of meteorological and magnetical elements, preparation of various meteorological and other returns, the calculation of daily averages and the writing out of the monthly abstracts. These latter consist of tables having the days of the month marked in numerical order in the first column and the hours of the day in order at the head of the columns, and there is one such table for each magnetical or meteorological element observed. In no case are the tabulations and reductions allowed to run into arrears unless very urgent special work is on hand. All observers attend the computing office

when not actually engaged on observing duty. The Second Assistant, Astronomical Department, and First Observer, are entrusted with the absolute magnetic observations. Although to every man are delegated duties which he is most competent to perform, the precaution is taken to keep some of the observers fully instructed in the different operations, to provide against the occasional absence of any member of the establishment. Every computing operation is systematically performed by one computer and checked by a repetition of the same operation by another. Residential quarters are provided for all members of the establishment on the Observatory premises. On Sundays and general holidays all observers except three are set free, one being kept on observing duty, one in charge of photographic instruments and one in charge of astronomical duties. The following are the initials which the observers attach to the several observations made by them:—

Name.	Initials
Vinayak Narayan Nene	V. N.
Ganesh Sadashiv Joshi	G. S. J.
Shitaram Vithal Bendarkar	S.
Narayan Sakharam Kelkar	N.
Lakshman Balvant Chaphekar	L.
Gopal Pandurang Sabnis	G. P. S.
Parshuram Lakshman Datar	P.
Damodar Vaman Sathaye	D.
Ganesh Raghunath Fagre	G. R.
Sakharam Balaji Bapat	S. B. B.
Vishnu Balkrishna Achwal	A.
Padmakar Vaman Sirdeshpande	P.

6. System of Observation.

(a) *Daily routine operations.*

Magnetical, meteorological and seismological observations are taken every day including Sundays at the hours 6, 10, 14, 16 and 22: the day commencing at midnight, Bombay (Colába), is reckoned from 0 to 24. The time of observation of each element is fixed and the observations are registered with strict punctuality as follows:—

From 5 minutes to the hour to 2 ,, after the hour.	Extent and description of clouds, state of the weather, occasional phenomena, and direction of the wind.
At 2 ,, ,, ,, ,,	Thermograph standard thermometer, dry bulb.
	Do. do. wet bulb.
,, 3 ,, ,, ,, ,,	Newman's rain gauge (in the wet season).
From 5 ,, ,, ,, ,,	Thermometer in the ground 1 inch deep.
to 7 ,, ,, ,, ,,	Do. do. 9 inches deep.
From 7 ,, ,, ,, ,,	Newman's standard barometer No. 58 and attached thermometer.
to 9 ,, ,, ,, ,,	Do. do. No. 48 and do.
At 12 ,, ,, ,, ,,	Grubb's declination magnetometer.
,, 14 ,, ,, ,, ,,	Grubb's horizontal force magnetometer and its thermometer.
,, 16 ,, ,, ,, ,,	Vertical force magnetograph No. 2 and its thermometer.
,, 17 ,, ,, ,, ,,	Vertical force magnetograph No. 1 and its thermometer.
,, 18 ,, ,, ,, ,,	Declination magnetograph.
,, 19 ,, ,, ,, ,,	Horizontal force magnetograph and its thermometer.
,, 20 ,, ,, ,, ,,	Thermometer attached to barograph.
From 29 ,, ,, ,, ,,	Thermometers in the Milne's Seismograph
to 32 ,, ,, ,, ,,	room.

The maximum and minimum thermometers in the thermometer shed, as also the solar radiation thermometer, are read twice every day at 8 and 16 hours.

The observations made once every day include readings of (1) the vacuum gauges of the magnetographs, (2) the maximum and minimum thermometers in the magnetograph room, (3) the ground thermometers 20, 60 and 132 inches deep, and (4) nocturnal radiation thermometer. (1) and (2) are read at 10 hours—the maximum and minimum thermometers being reset immediately after. The ground thermometers (3) are read at 14 hours, and the nocturnal radiation thermometer (4) at 8 hours. Newman's rain gauge is read daily at midnight during the monsoon months, as are also the discharges of the syphon of the self-registering pluviograph once or often as required. The electric clock is duly regulated by comparison thrice every day with the sidereal clock. Government chronometers, belonging to the Royal Indian Marine and Royal Navy, in store at the Observatory, and those received from merchant ships in harbour, are wound daily or as required, and comparisons with a correct clock are made with sufficient frequency to render the instruments always ready for issue at call with well-determined rates.

(*b*) *Weekly routine Observations.*

Double sets of observations of vibration and deflection are made with the unifilar magnetometer every Wednesday for the determination of absolute horizontal force. The same instrument is used every Thursday for the determination of declination. Observations for magnetic dip are made five times in a week—treble set on every Tuesday and double set on every Friday. Transit observations of stars for the determination of time and the errors and rate of the sidereal clock are made on Mondays, Wednesdays and Fridays in the dry months of the year. During the monsoon months no opportunity is lost for observing either the sun or the stars whenever visible. The adjustment of the Transit instrument is tested frequently by reference to the fixed collimator mark—the errors of collimation, level, &c., being determined from time to time or whenever the collimator shows a displacement of the telescope or any considerable discordance appears in the clock errors derived from observations of stars of different north polar distances.

(*c*) *Monthly Observations*

Regular deflection observations for scale-coefficients of the two vertical force magnetographs are made with deflector on North side only at 2·5 feet position about the middle of every month between 18^h and 24^h, the deflector used being tested on the Electrometer Tower the day following the former observations.

The magnets of Grubb's declination magnetometer* and Grubb's horizontal force magnetometer are vibrated through a large but less than 1° arc about the 20th day of every month, and its accuracy of return to the original position is carefully recorded.

(*d*) *Quarterly, Half-yearly and Yearly Observations.*

Once every quarter the weekly intensity observations are supplemented by observation of the magnet with its inertia cylinder.

Once every six months the usual monthly deflection observations of vertical force magnetographs Nos. 1 and 2 are supplemented by observations with deflector on the South side also.

---

* The large magnet of the instrument was replaced in September 1901 by a spare Kew Collimator magnet suspended by a fine phospho bronze wire. The length of suspension being 35 inches, the coefficient of torsion was found to be practically *nil* (1·000065). The angular value of one scale division is 1'·88, and the Transit telescope allows a tenth of the division to be accurately estimated.

Once every year the same series of observations are repeated for the two vertical force magnetographs and horizontal force magnetograph with deflector at various distances on each side of the magnet.

The time of vibration of Grubb's Declination and Horizontal Force Magnetometers are determined once a year.

7. General description of the meteorological, seismological and magnetical instruments; their adjustments; and the process of reduction.

The following details show the special circumstances in connection with the condition, situation and adjustments of the various instruments, as also the habits of the observers and their routine processes of reduction, to enable the reader to form an independent judgment as to the reliability of the observations and the degree of precision attained in the results.

(*a*) Meteorological Instruments, 1900 and 1901.

Standard Barometer.—The barometer fixed on the eastern wall of the magnetical observatory, a few feet from the north-east corner of the room, is by Newman, No. 58, and has been in uninterrupted use since the establishment of the Observatory. Its tube is 0·53 inch in diameter. The cistern, which is of glass, is 37 feet above the mean sea level at Colába. The brass scale is moveable and terminates at the lower end in a point of ivory, which for every observation is set so as just to meet its reflected image in the mercury. The scale is primarily divided to 0·05 inch, and by means of a vernier 0·002 inch can be read off. To the moving vernier are attached two small brass plates, one in front of and one behind the tube. The setting of the instrument consists in raising or lowering the vernier until the lower edges of the brass plates appear just to cut tangentially the convex surface of the mercury in the barometer tube, the line of sight being so regulated in height as to coincide with the edges. A thermometer with a cylindrical bulb dips into the cistern and was in use up to 1884, but in an investigation described in the "Bombay Magnetical and Meteorological Observations, 1871 to 1878," it was discovered that the readings of the thermometer, as measuring the temperature of the mercurial column, were considerably erroneous and the use of that thermometer was, therefore, discontinued, and from the beginning of 1885 a thermometer by Murray and Heath, No. 2, divided to half degrees with its bulb immersed in a column of mercury held in a glass tube of nearly the same diameter as that of the barometer tube, was fixed to one side of the barometer, and readings of this thermometer have been used since 1885·0. The error of the attached thermometer varies by about a quarter of a degree within the annual range of the temperature of the barometer, and in adopting a mean error throughout, small pressure corrections of ± ·0003 have been disregarded.

The barometer was lifted down in 1866 and the mercury carefully run up to the top of the tube, when it gave the sharp metallic click that is indicative of a good vacuum. It was replaced carefully in its position, the tube, &c., being kept in proper adjustment to verticality. The barometer is of the particular class, described at pp. 56 of the "Report of the Committee of Physics of the Royal Society, 1840," and, therefore, the scale of the barometer is laid off from the zero point from an authentic standard.

Since 1841, the year in which it was first mounted, there has been a gradual accumulation of scum on the surface of the mercury in the cistern, and the glass cistern became more and more opaque so that the setting operation of the ivory zero point of the scale became a matter of difficulty and some uncertainty. For this reason, the usual method, as described, was changed on the 22nd May 1866. On that day the zero of the scale was set *once for all* and the

setting screw removed, and suitable corrections for capacity were thenceforward applied to the readings. These were taken from a table derived from the following formula :—

$$\text{Capacity correction} = \cdot 04321\ (h_o - 29\cdot 943)$$

'h_o represents the uncorrected reading'.

The data for the construction of this formula will be found in the "Bombay Magnetical and Meteorological Observations, 1865-1870," Introduction, pp. x, xi.

As the fluctuation of the barometer reading from its mean value very rarely reaches ·4 inch, requiring a correction of ·017 inch, it seems very improbable that an error of so much even as ·001 inch occurs from any inaccuracy in the adopted values of the relative capacities of the tube and the cistern. Since the change was effected, the comparability of the observations for showing variations is on that account much better secured throughout.

The depression of mercury due to capillary action in a tube of ·53 inch diameter being small, no correction is applied on this account.

On 30th July 1875 it was discovered that the vernier scale of the barometer was short by ·002 inch. To correct the errors arising from this fault, instructions were issued to note the positions of coincidences at ·000 and ·050 of the vernier scale with the scale of the barometer and also the non-coincidences at the above scales when the barometer reading was in exact half-tenths of an inch. It became then an easy matter to construct a table of corrections and to apply them for all positions of the vernier. These corrections have throughout been applied since then.

The barometer is read daily, including Sundays, at 7^m after the hours of observation—6, 10, 14, 16 and 22. Each reading is corrected by the application of the temperature correction—reducing the temperature of mercury column to 32° F. and that of the brass scale to 62° F. Another correction is applied to remove the error of discontinuity due to change of thermometer. The first correction is made by means of Table II of the Report of the Committee of Physics of the Royal Society, the last by a constant reduction of the corrected pressure by ·002 inch. The considerations on which the last correction is based are as follow :—(1) the tabulations of the barograph are known to exhibit correctly the diurnal variations of barometric pressure, free from any sensible influence of variations of the temperature of that instrument; (2) the mean of twenty-four hourly barograph tabulations on any day is taken to correspond to the mean of the same twenty-four hourly pressures observed with Newman's barometer No. 58 and corrected for the temperatures indicated by the old attached thermometer; (3) it does not follow that the mean of the tabulations for the five observation hours (6, 10, 14, 16 and 22) will then correspond exactly to the mean of the observed pressures for the same hours, because the old thermometer does not indicate precisely the actual variations of temperature of the mercurial column: in fact the latter mean pressure was, on the average of all the observation days of the year 1872, ·0008 inch in excess of the former mean pressure; (4) nevertheless, the correspondence for the five observation hours was adopted as near enough to identity with the correspondence for the twenty-four hours, and the recorded mean pressures of the years 1873 to 1884 will thus be ·0008 inch in excess of those of the years before 1873; (5) the old attached thermometer and the thermometer No. 2 by Murray and Heath were read together at the five observation hours throughout the year 1883, and the average excess of the former reading over the latter was found to be 0°·62; (6) hence, to make the pressures, reduced for the readings of Murray and Heath No. 2, correspond to those reduced for the readings of the old thermometer, the former pressures must be decreased by $\cdot 0027 \times 0\cdot 62 = \cdot 0017$, or, as the pressures are read and calculated only to thousandths of an inch, by ·002 inch. Thus, taking the period before

1873·0 as a standard period, the recorded annual mean pressures of the years 1873 to 1884 will be ·0008 inch too high, and those of 1885 and later years ·0005 inch [—·0020+·0017+·0008] too high.

Indirect comparisons of the barometer were made with the Kew standard by means of two mountain barometers by Negretti and Zambra, numbered 705 and 711, when they were both found (in July 1876) to read ·011 inch higher than the Observatory standard. In England, however, they had been found to read ·007 and ·006 respectively higher than the Kew standard. Hence, on an average the Observatory standard barometer read ·004 below the Kew standard. It happens that this is exactly the average amount by which the readings of Newman's barometer have been over-reduced for temperature (*vide* Introduction to the Bombay Magnetical and Meteorological Observations, 1871-1878, paragraph 72).

Barograph.—The photographic barometer stands separate on two pillars in the magnetograph room. It was supplied, through the Kew Committee of the British Association, after being tested at the Kew Observatory, and is similar in construction to those adopted by the Meteorological Committee of the Royal Society for the seven observatories established by them in the United Kingdom in the year 1867. The barograph has been treated as an independent instrument in respect of the variation of pressure occurring in the course of a day, but only as an auxiliary to Newman's standard barometer, No. 58, in respect of mean daily pressures. The excess of the mean of the five observations of the standard barometer made daily over the mean of the corresponding five barograph tabulations has been used as a correction to the mean of the twenty-four hourly tabulations for the same day, a new correction being calculated for each day. A detailed account of the instrument and its particulars and adjustment is given in the "Bombay Magnetical and Meteorological Observations, 1871 to 1878," pp. xvi to xlvi.

Thermometers.—Standard Dry Bulb.—The thermometer is by Casella and marked No. 401; it is a mercurial thermometer, with a cylindrical bulb 3·7 inches long and about 0·37 inch in diameter. The stem is graduated and divided into degrees: the range is from 0° to 120°, measuring 12·36 inches; and the bulb is freely exposed to the air. It is placed in the cage of the thermograph shed about 5 inches from and similarly exposed as the thermometer which records photographically.

Standard Wet Bulb.—This is also a mercurial thermometer by Casella No. 402 and has a cylindrical bulb 3·7 inches long and 0·37 inch in diameter. The thermometer is graduated on its stem and is divided into degrees with a range from −10° to +120°, measuring 13·03 inches. The bulb is covered with muslin, and is kept moist by the capillary action of a bundle of fine cotton threads immersed in a small vessel of distilled water near the thermometer bulb, and passing loosely round the thermometer stem just over the bulb. The same vessel of water supplies the evaporating fluid to the photographic wet bulb placed about 3 inches distant.

The errors of the above standard thermometers have been carefully found and corrections duly applied. The errors were determined by a Kew standard (No. 368) thermometer in February and March 1875, at fourteen points ranging between 32° and 102°, and the readings were found to be within 0°·1 of the truth. On 20th December 1877 the errors of the freezing points were also tested, showing no noticeable change (*vide* paragraph 53, Table 10 of the Introduction to the Bombay Magnetical and Meteorological Observations, 1871 to 1878).

Photographic Dry Bulb and Wet Bulb.—The height of the bulbs of the thermometers of the thermograph above the ground is 10 feet. The cage is placed in one of the most exposed parts of the Observatory grounds away

from any building; it is, however, screened, as is also the thermograph room in which the recording apparatus is placed, by a roomy shed with a planked roof which is everywhere 2 feet above the roofs of the cage and room: the sides of the shed are of the louvre construction, with double sheets of zinc enclosing a thick layer of felt substituted for the wooden laths, and with a vertical distance from lath to lath of one foot: the lowermost two feet of the sides are guarded simply by horizontal iron rods: the roof of the shed is covered with thick felt, which again is covered with strong canvas, and the whole of the exterior—sides and roof—is painted or lime-washed white.

Ground Thermometers.—Thermometers with their bulbs at the respective depths below the surface of the ground of 1, 9, 20, 60 and 132 inches are regularly observed, the two former five times a day and the three latter once a day at 14 hours. They are all by Newman, of London, and are divided on brass scales. The value of one division, the approximate range of part of scale exposed above ground, and the lengths of that part and of one average degree, are shown below for each thermometer:—

Depth of Bulb.	Divided to	Approximate Range of exposed part of Scale.	Length of that Range.	Average length of 1°.
Inch.			Inches.	Inch.
1	1°	30° to 145°	8·19	·071
9	0°·2	70° to 115°	5·20	·116
20	1°	35° to 160°	6·73	·054
60	1°	35° to 160°	6·81	·054
132	1°	50° to 140°	6·44	·072

The 1-inch and 9-inch thermometers are on flat brass scale frames, which lie against wooden posts in the ground, and have their bulbs in contact with the loose red earth which fills the holes in which they are placed; the 20-inch, 60-inch, and 132-inch thermometers have their lower parts enclosed in brass tubes with ends curving off to a point, and the upper parts are in wooden box frames, to which the brass scales are fixed. The reason why only one observation is made daily of the three deeper thermometers is, that it was found by hourly observations in 1849, 1850 and 1851 that no appreciable diurnal variation of temperature reached the depth of 20 inches.

The errors of graduation of the ground thermometers are unknown.

Robinson-Beckley Anemograph.—From the establishment of the Observatory to December 1865 a rough pressure anemometer was in use. This was replaced by a small anemometer by Robinson which remained in use up to June 1867. From the beginning of the month of June 1867 was brought into use an anemograph of the kind designed by Robinson, with improvements by Robert Beckley, and it remains in action to this day. It was made by Mr. R. W. Munro, and was supplied through the Kew Committee of the British Association, after being tested at the Kew Observatory. In this instrument the arrangements for the registration both of movement and direction of the wind are mounted on one shaft, and the registrations are made on a single sheet of paper, which is changed daily. The essential part of the apparatus for measuring the movement is a vertical spindle, to which cross arms are attached at the top, carrying four hemispherical cups of copper. The cups are attached to their several arms, so that, looking from the central axis, their convex sides are seen turned to the right hand, and the wind, acting with greater effect upon the concave than on the convex sides of the cups, causes the system to rotate in a right-handed direction. It is the number of these rotations, 140 of which are reckoned to a mile of movement of the wind, that tells us how

fast the wind has been blowing; and the number is reduced, by means of wheel-work, 7,000 times before reaching a small cylinder, carrying a brass spiral pencil which traces the movement on the registering paper; this latter is metallic paper of the kind used for pocket-books, and is wrapped round a brass cylinder, which is kept rotating by clockwork, so that as the paper passes under the spiral pencil, which presses slightly upon it, the black movement trace is left upon it. The wind vane, which consists of a pair of windmill vanes with a connecting spindle having an endless screw in the middle gearing into a fixed horizontal toothed wheel, is attached to a tube that surrounds the lower part of the vertical movement spindle; to the bottom of the tube is fixed a toothed wheel, which, in communication with other such wheels, conveys the motion of the vane *unchanged* to a small cylinder with spiral pencil, which traces the changes of direction on the register; and it is so arranged that the movement and direction are traced on parallel strips or bands of the same sheet of paper which is changed daily at 10 hours. The heavy parts of the instrument—the direction vane and appendages, and two long brass tubes which connect the instrument proper with the recording apparatus—are supported on friction balls which run in grooves partially filled with oil, thus reducing the friction to a minimum. The instrument is erected on the old Time Ball Tower, at a height of 53 feet above the ground, and 95 feet above the mean sea level, over a platform 12 feet in diameter, which is designed to give ready access to the instrument, and to protect it from irregular currents of wind, glancing from the convex surface of the dome; and it is supported outside by a fixed cast-iron standard, to which is attached, at the top, the toothed wheel, into which the endless screw of the spindle connecting the windmill vanes gears. The centres of each pair of opposite hemispherical cups are four feet apart, and three and a half feet above the platform, and the diameter of the cups is 9 inches. The diameter of the vanes is 15 inches, and the breadth of the fans 4 inches. The register form is printed in red, with lines dividing its length into hour spaces, its breadth, on the movement side, into five spaces, each representing 10 miles of movement of the wind, and numbered from 0 to 50 miles; and on the direction side, into spaces corresponding to 11¼ degrees on each side of the 16 principal directions N.N.E., N.E., &c.....N.N.W., N., which spaces are numbered consecutively 1, 2, &c.....15, 16.*

Tabulation of Anemograms.—Numerical tabulations have been made of the movement and direction of the wind during the interval between every two successive hours in the following manner:—the number of miles indicated at the point where the velocity trace cuts a horizontal hour-line being read for two successive hours, the excess of the latter over the former reading (adding 50 if the trace has passed over from left to right of the form) gives the movement for the interval; and the number of the space in which the direction trace lies during the interval is entered as representing the direction. The estimations of movement are made only to the nearest full mile. Should the direction trace not lie all in one space during the whole interval of an hour, then if the change of direction exceed 90° or eight points, the whole observation for that hourly interval is rejected; but if it lie within that limit, by an inspection of the movement and direction traces together, the direction whence the aggregate flow of air was the greatest is estimated, and this direction is adopted for the full hour. On the average of the years 1871 to 1901, out of 8,760 hours per year during which the instrument was in action, 2 only had to be rejected because the direction of the wind varied more than eight points within the hour.

Method of reduction.—Hitherto we have had to speak of phenomena liable only to simple increase and decrease of value, and not subject to any change of quality. Such phenomena being properly and completely evaluated

* A more detailed account of the Colába anemograph will be found in the "Bombay Magnetical and Meteorological Observations, 1865 to 1870," Appendix I, page 199.

by simple numbers, we may apply to the numbers any arithmetical operations, *e.g.*, averaging, and infer from the results of those operations corresponding properties of the phenomena. But we have now come to a phenomenon which requires two numbers to express it, one representing its amount and the other a varying quality,—the first referring to the velocity, and the second to the direction of the wind. Here we may no longer apply arithmetical processes directly and indiscriminately to the observed numbers: but, the subject being one of motion, we must treat them according to the principles of the science of motion. These principles tell us that the motions may be as well expressed by means of two varying numbers referring to two invariable qualities, as by a varying number referring to a varying quality; and they show us how to obtain either form of expression from the other. The invariable qualities chosen in the present case are the directions north and east, the actual wind blowing in each hour being resolved into north and east components, which may be regarded separately as the velocity of the wind in the invariable direction north or south, and the velocity of the wind in the invariable direction east or west. The resolutions are effected by means of the formulæ:—

$$\text{North component of velocity of wind} = m \cos (n \times 22^\circ\tfrac{1}{2}),$$
$$\text{East component of velocity of wind} = m \sin (n \times 22^\circ\tfrac{1}{2}),$$

where m is the movement observed, and n the number of the direction space under which the wind of the hourly interval is classed. When the sign of either of these calculated quantities is negative, it implies that the wind blows from the opposite direction, *i. e.*, from south or west. The calculations are readily made by means of tables to the nearest tenth of a mile of velocity per hour. Having now substituted the two equivalent winds for the real one, we may with propriety proceed to combine together numbers of observations by algebraical addition and averaging, treating the north and east components of the wind each by themselves. The averages thus obtained from the observations of any given period will represent the velocity with which the wind must blow from the northward (from the southward if the sign of the average be negative) continuously for the whole period, in order that the total movement of the wind from that direction may be the same as the total movement from the same direction produced by the winds which actually blow, and similarly the velocity with which it must blow continuously from the eastward (westward if the sign of the average be negative).

No corrections have been applied to the anemograph tabulations on account of friction.

Dines's Anemometer.—This instrument by R. W. Munro of London was received in January 1897 and fitted up in February on the same tower on which the old Robinson-Beckley Anemograph is fixed, and has been in action since. The fixture is so arranged that one instrument does not in any way interfere with the action of the other. The anemograph is fixed about 3 feet high centrally on a flat platform on the top of the old Time Ball Tower and the pressure tube anemometer is located on the edge of this platform on the north-east side—the distance between the two instruments being the radius of the platform—about 6 feet. The vane of the latter is placed about 6 feet above the platform, so that it is about 3 feet above the level of the cups of the anemograph. The tower is 53 feet high from the ground and 95 feet above mean sea level and, looking at the exposed position of the tower, the two instruments have been placed in as identically analogous conditions as was possible under the circumstances. The new instrument consists of two main parts, the "head" and the "recording apparatus." The "head," which is fixed on the top platform, is composed of two parts, the moveable and the fixed. The former consists of a hollow tube (1 inch in diameter) to which is attached at right angles at the top and opening into it, another similar tube open at one end and closed at the other, where the

vane is attached. The fixed part consists of three concentric tubes forming two annular spaces. The central tube, which stands higher than the middle tube by about ·7 inch, is supported a little below the top of the middle tube by two radial pieces, and being closed at the top it serves as a pivot and support for the moveable part which just fits but turns freely round the middle concentric tube as axis. The moveable part thus opens into the inner annular space. The outer concentric tube, which is considerably shorter in length than the middle one, has some fine holes bored into the sides, the annular space between it and the middle tube being closed at the top. As the wind vane attached to the moveable tube keeps the latter always facing the wind, the action in the inner annular space is compressive, as the wind blows directly into it, whilst in the outer annular space the air as it rushes past the small holes produces a suction effect resulting in decrease of pressure.

The recording apparatus consists of a large cylindrical vessel, almost air-tight, filled with water to a certain level. In this is introduced a specially constructed hollow copper float, open from below and weighing about 31,900 grains, which rises or falls in response to the change of pressure of the air in the cylinder above the float and of the air within the float, caused by the action of the wind which is communicated from the "head" to the recording apparatus by two tubes (40 feet long) led by gentle curves from the former to the latter. The tube which is attached to the suction part of the "head" enters the vessel from the top lid, the other leading from the vane tube opens into and reaches the top part inside the float. As the action of the wind in the former space reduces the pressure, the float becomes more buoyant and rises, while the action of the wind inside the float causes increase of pressure, and thus co-operates in raising the float. The float ends in a narrow smooth rod which, passing through an almost air-tight vulcanite collar in the top lid, carries a small cup with attachment of pen, &c. On the top of the lid, a little removed from the recording pen, is fixed a small cylinder with clock-work, carrying the paper chart. The pen is so attached as just to fall on this paper by its own weight to avoid unnecessary friction between the two. When the float is put down, the pen is adjusted by the lifting screw to coincide with the zero line on the chart. The float when released rises, carrying the pen with it, which is again brought carefully back just to the zero line by the addition of small weights to the cup. The fluctuation of pressure inside the cylinder caused by the wind is thus recorded. The peculiar construction of the float makes the upward force measured in units of velocity vary uniformly with the ordinate: thus a velocity of 10 miles gives an ordinate of ·6 inch on the chart, that of 20 miles 1·2 inches, and so on.

Tabulation of the Anemograms.—Numerical tabulations are made in a table in which the days of the month are marked in numerical order in the first vertical column and the hours of the day at the head of the succeeding 24 columns where the hourly averages are entered. The twenty-sixth column gives the sum and the next column the mean hourly velocity for the day. At the bottom of the table, columns are provided for the sums, means and variation. The determination of the hourly average is generally done by inspection, the hour, when necessary for accuracy, being sub-divided into convenient divisions. The average of these divisions is taken as the mean hourly velocity, due weight being given to the time of each sub-division. In very complicated movements and doubtful cases the planimeter is used to check the inspection results.

Four photolithographic copies of the velocity chart shown in Vol. XXXVI of 1897, at page x, represent different but typical characters of the wind. The first shows the character of the wind during a thunderstorm, the second during a somewhat gusty day, the third during a somewhat stormy day, and the fourth during a typical usual day.

Rain Gauges.—Newman's rain gauge, which has been in use since 1845, is made of copper and exposes for the collection of rain-drops a circular surface of an average diameter of 12·035 inches, forming the top of a funnel, which opens into a cylindrical vessel below, having a diameter of 5·732 inches : a float of a slightly less diameter, which may rise and fall freely, rests upon the water in this vessel, and having a wholly convex external surface, it allows the rain as it falls to flow off and raise the level of the water and with it the float. To the middle of the float is fixed a graduated wooden rod, each division of which represents ·05 inch of rain ; and the readings of this scale, which are easily estimated to fifths of a division, are made where it is cut by the upper edge of a light brass rod placed horizontally across the mouth of the funnel, but half an inch below the edge of the exposed circular surface ; the scale passes through a hole in the middle of the horizontal rod, and is thus kept always in a vertical position. The range of the scale is from 0 to 4·00 inches, and the readings of the scale are entered in the meteorological register and the differences taken for every interval between successive observations : the rain is allowed to accumulate in the vessel generally till the reading is somewhere above 2·00 inches, when the water is let out, by means of a brass cock at the bottom, till the reading comes down to 0·00 inch. This latter reading is always maintained during intervals of dry weather—when, from evaporation, the scale would otherwise fall lower—by pouring small quantities of water into the gauge : the reason of this is obvious, as, if some water were not always retained, the float would sometimes rest on the bottom of the vessel and so cease to perform its function of rising equally for equal increments of rain. The scale on the wooden rod is graduated so as to agree approximately with the data—the diameters of the gauge and measuring vessel—given above. The error of the scale according to which the rod was graduated was less than a thousandth of the whole.

Newman's gauge stands on a large rectangular block of stone, in a position intermediate between the Entrance Gate, the Magnetical Observatory, and the Thermograph Shed, where the altitude of the highest neighbouring object, as seen from the gauge, is about 30°. It is supported by three feet, which are embedded with lead in holes cut in the stone block, and its circular mouth is at a height of 4½ feet above the ground and about 35 feet above the mean sea level.

Photographic rain gauge.—A description of this instrument also will be found in the Introduction to the "Bombay Magnetical and Meteorological Observations, 1871 to 1878," page xlvi. In 1900 and 1901 the syphon discharges were received in glass bottles and measured by means of a graduated glass tube and a marked glass bottle holding exactly half an inch of rain.

It was mentioned in former years that the occurrence of the discharging action of the syphon was occasionally liable to some uncertainty—the water at times trickling over the bend of the tube in considerable quantities before the proper discharge commenced. After trial of many modifications in the form of the syphon one was at last hit upon, which is free from this fault, and by which the tube is, moreover, kept in a satisfactorily clean condition from the beginning to the end of the monsoon, simply by the washing that takes place in the ordinary automatic discharges. Since November 1884, when the new syphon was brought into use, the discharges have been regular and have failed on very rare occasions. To prevent birds alighting upon the funnel and choking it with their droppings, a conical arrangement of pointed iron spikes surrounding the funnel was attached in 1882, and has been found to be effective.

Constants for converting Syphon discharges into inches of Rainfall.—As the surface exposed by the rain gauge funnel is 50·286 square inches, an inch

of rain contains 823·955 cubic centimeters. With the aid of a cubic centimeter measure,* 412 cubic centimeters of water were poured into a narrow-necked glass bottle, and a file mark was made on the bottle neck at the level up to which the water rose. A glass tube was also graduated by means of the same cubic centimeter measure, so as to read off thousandths of an inch of rain with ease. The bottle is filled as often as there have been discharges from the rain gauge syphon, and the final excess or defect is measured with the graduated tube. The use of the bottle began on 31st July 1879 and continued till the 26th July 1884, when it was accidentally broken. An exact copy of it, which had been prepared beforehand, was then substituted for the original bottle, and this copy is still in use.

Measurement and distribution of Syphon discharges.—The discharges are measured every day, or oftener during heavy rainfall, and are, of course, always an integral number. For each measurement the average value of a discharge is attributed to each of the intervals of time, shown on the rain curve, between pairs of successive discharges; and it remains then only to distribute this quantity, for each filling of the receiving vessel, by means of tabulations of the ordinates of the rain curve. When, as is often the case, the rate of fall of the rain at the time of a discharge exceeds $1\frac{1}{8}$ inch per hour, it is necessary to allow for the rain that enters the receiving vessel during the known time (about 15 seconds) of discharge, the allowance depending on the rate of rainfall, which is easily estimated for this purpose by noting, with the aid of an appropriate paper scale, the inclination of the rain curve immediately after the time of discharge. The aggregate of such allowances is deducted from a day's (or other) measurement before dividing the quantity equally amongst the several intervals.

Determination of scale of Rainfall ordinates.—The factor for converting ordinates of the rainfall curve into inches of rainfall was found by experiments in which a determined weight or volume of distilled water was poured into the receiving vessel, and the change of length of the ordinate produced thereby was carefully measured. In an experiment made on the 7th July 1900, the quantity of water poured into the vessel was equivalent to ·480 inch of rain, and the change of length of the ordinate ·480 of a true inch; whence the factor is found to be 1·000, which is applicable to all the rainfall registrations of the year 1900. In a similar experiment made on 15th July 1901 the quantity of water poured into the vessel was equivalent to ·480 inch of rain and the change of length of the ordinate ·480 of a true inch; whence the factor is found to be 1·000, which is applicable to all the rainfall registrations of the year 1901.

The tabulations are made with the true-inch scale of the thermograph tabulating instrument, using the white line as datum; and the reading of this datum which corresponds to the reading ·000 of the rain curve, when the receiving vessel has just been discharged, is re-determined whenever the adjustment of the recording apparatus is disturbed. For this purpose an average is taken of a number of measurements for all of which the rain is falling very slowly at the time of the syphon's coming into action and for a short time longer. It is necessary to select such occasions, because at times of heavy rainfall the curve rises sensibly before the light has had time to make a distinct impression on the sensitive paper. The mode of tabulating is (1) to set the scale on the constant reading corresponding to the white line, (2) to move the sliding piece until the index is set upon the white line, and (3) to move the sliding bar till the index is set upon the curve, and then read the scale. By setting the paper carefully, so that a considerable length of the white line

* Lent by Mr. F. Chambers, whose verification data show it to be accurate to a thousandth of the 100 cubic centimeters which it is designed to measure.

is practically parallel to the lateral motion of the frame, the repetition of the first two operations of tabulation is avoided until many hourly ordinates have been read; and then a new setting of the paper is made for another stretch of the white line.

(*b*) Seismological Instruments, 1900 and 1901.

Milne's Seismograph.—This instrument, No. 12, supplied by R. W. Munro of London, was mounted in September 1898, in the small building formerly used for electrostatic observations which was materially altered in order to suit the requirements of a seismograph installation. It consists of a single room 10 ft. sq. with a double folding door on the south side and a single large window on the north side. It is 14 feet high up to the eaves with a gable roof, and is well ventilated by adjustable openings made in the walls near the ground and in the gable ends at the top. The pier is placed in the middle of the room. Its foundations run 5½ ft. below the flooring at which depth a huge basalt boulder was struck, over which was laid a bed of concrete 5 ft. sq. and 2 ft. deep. This bed supports a mass of rubble masonry 4 ft. sq. and 1½ ft. deep, which finally carries a brick pillar 1½ ft. square and 5½ ft. high. The pillar is plastered with cement and carries a ½-inch marble slab at the top. The general features of the horizontal pendulum seismograph are a boom consisting of a light aluminium rod supported at two places. One end abuts against an adjustable pivot at the base of the "vertical," and at a distance of about 2·3 inches, which was changed in September 1901 to 5·0 inches, from this end it is held in horizontal position by a platinum wire passing over the "vertical," with suitable adjustable screws at the top. For free motion a short piece of unspun silk is attached to the platinum wire at the top, and to steady the movement of the boom, which is very light, as also to obtain the steady point, a balance weight is suspended on a stirrup fixed at about 2 inches, which was changed in September 1901 to 4·3 inches, from the pivot end. The boom carries at the outer end a rectangular plate with a short slit cut parallel to the boom through which light from a lamp is reflected by a suitable mirror on to the film in the recording box, which has a corresponding slit, but cut at right angles to the former, thus allowing only a point of light to affect the film.

The base of the "vertical" is formed by an iron triangular bed plate with three levelling foot-screws. One of the screws is finely divided with a pitch of 0·5 m.m. which serves for final adjustment. The bed plate is so placed on the pillar that two screws (including the adjustment foot-screw) are located due E.—W., while the third points to North. The distance between the first two is exactly 150 m.m. and therefore a complete turn of the adjusting screw raises or lowers that end by 0·5 m.m. or through an angle $= \tan^{-1}\frac{1}{300}$. A lever attached to this screw with a scale enables it to be turned through 1°, 2°, or any other fraction of a complete turn. This, with the usual sensibility of 3·5 m.m. for a 1° turn of the screw, allows of the determination of the tilt up to 0·3″ of arc measured by a deflection of 0·5 m.m. on the seismogram. The clock-work drives a roller, which pressing slightly against a friction roller allows of a strip of sensitive film being carried between them at a uniform rate of about 59 m.m. per hour. A small watch placed on the recording box, with its long minute hand carrying a small plate which extends to about 11 m.m. over one end of the slit of the recording box, produces an eclipse every hour at 30 minutes past the hour, cutting off the light at that end of the slit. By carefully watching the beginning and end of the eclipse by means of a chronometer, the exact time of the centre line of the white mark left on the sensitive film by the eclipse can be easily read off on the seismogram. Plates Nos. 1, 2 and 3 show a few of the principal disturbances recorded.

The Colába Seismographs.—The Seismographs designed and constructed locally are installed in the building formerly known as the small magnetic room altered to suit the requirements of the installation. They are mounted on an isolated pillar 1½ ft. sq. and 7 ft. high with its foundation on a rock. One of them is oriented so as to record E.—W. movements, while the other to record N.—S. movements.

The essential parts of the two horizontal pendulums are a metal boom about 5 feet long, one end of which carries a hard fine steel point which abuts against a shallow cup of agate carried by a heavy screw free to run in and out of the pillar at a point about 6 feet below its top. The boom, at its other end, carries a metal box adequately loaded with shot. The pillar at the top carries a thick marble slab in which are firmly bolted the slow-motion adjustment screw, the agate bearing and the finely balanced pivot for receiving the tie from the boom. To the top of the boom-box is attached a short glass rod which receives (freely) a close but just fitting fork fixed at the short end of a finely balanced lever which magnifies the movements of the boom about 10 times. The longer arm is about 5 feet in length, so that, as the maximum range of movement as recorded by the lever is restricted to 5 inches, the disturbance record is almost a straight line on the cylinder and parallel to its axis—points which are obviously essential for accurate analysis of the Seismograms. The longer arm of this lever carries at its end an agate bearing to receive another small pen balanced on a fine knife-edge. The periods of both these levers are adjusted to about 3 seconds. The record is taken in glycerine ink with a crow-quill on a metal cylinder about 5 inches in diameter worked on a screw axis by clock-work which gives a lateral motion to the cylinder as it rotates. The cylinder, while completing one revolution in one hour, advances $\frac{1}{10}$ inch, enabling a continuous record being taken on the cylinder for 24 hours. With a suitable electro-magnet and connections with an electrical clock, the time is recorded on the paper every 20 minutes. This, with the regular motion of the cylinder and the clock-work, has been found to give sufficiently accurate results for all practical purposes. The electric connections are so arranged, however, that they can be altered at will to give minute-time marks whenever they are required or are necessary.

The instrument is brought into adjustment by the lower pivot screw which moves in and out enabling the period to be regulated, while the adjustment screw at the top of the pillar, giving a slow motion to the point of attachment of the tie from the boom, allows the zero to be properly adjusted. The vertical distance between the points of attachment of the horizontal pendulum is 75 inches, and the distance between two consecutive threads of the adjustment screw traversed by a *complete* turn of the screw is $\frac{1}{16}$ inch from which the angle of the corresponding tilt is obtained by calculation. After suitable adjustment of the recording lever, pen, &c., the displacement of the pen corresponding to a tilt due to a complete turn or a fraction of a turn of the screw gives the sensibility of the instruments. For accurate work with delicate instruments of this type which involve considerable friction, it was found advisable *every* day, at the time of change of paper, to measure the sensibility and to ascertain that it remained practically constant. As the instrument has been constructed locally, it was thought undesirable to use the upper adjustment screw oftener than was absolutely necessary, its use being restricted only to the correction of zero. The following device, therefore, is adopted. The pillar is provided with a brass bar oriented E.—W., 1½ and 4 inches in section and about 5 feet long, which is embedded in the pillar passing horizontally through it and about a foot below the top. A similar bar is placed at right angles to the former and oriented N.—S. The arms of these two bars which project 1¾ ft. from the face of the pillar are daily used for supporting, for a few seconds, a weight of

7 lbs. This weight placed at a certain distance on the arms produces a definite tilt in the pillar in the direction of the weight. This has been very accurately ascertained periodically from a series of careful experiments and equals 0·5 second in arc. The weight of 7 lbs is therefore used to produce this known tilt from which the displacement of the pen on the paper enables the sensibility of the instruments to be effectually controlled.

The pendulum itself with its two fine agate bearings and steel points leaves little room for improvement. The recording part of the instrument gives satisfactory diagrams, in spite of the friction at the fork, friction at the fulcrum point and friction between the writing pen and the paper. Now and again, however, the pen is completely lifted off the paper by meteorological causes affecting the well balanced large recording lever, resulting in loss of record. This part of the N.—S. Seismograph was, therefore, finally modified in October 1902 and suitably fixed to the boom, the recording balance pen remaining as before. Plates 1, 2 and 3 show lithographed pictures of some of the principal E.—W. disturbances recorded by the instrument.

(*c*) Magnetical Instruments, 1900 and 1901.

Kew Unifilar Magnetometer.—A description of the standard instrument, No. 23, by Elliott Brothers, with which the observations of absolute declination and of horizontal intensity for the years 1900 and 1901 have been taken, will be found on pp. xxxiii to liii of the Introduction to the "Bombay Magnetical and Meteorological Observations, 1865-1870"; the description includes an account also of the situation of the instrument, of the nature and routine of the observations taken with it—with examples of observation and computation forms filled up with the figures of actual observations—and of the formulæ of reduction and the constants involved in them.

The entries in columns 1 to 17 and 19 of the Tables of Observations of Absolute Horizontal Force are copied directly from the computation form: column 18 is given to show the degree of accordance existing in the determinations from deflections with the deflecting magnet at the respective distances 0·8 foot and 1·0 foot from the deflected magnet; and the numbers in column 21 are the products of those in column 20 multiplied by the constant number ·46108.

The description, referred to above, of the observation of absolute declination will render clear the meaning of the numbers entered in each column of the Tables of Observations of Absolute Declination: all these, except the monthly means in columns 12 and 13, are taken directly from the observation form.

Kew Dip Circles.—A description of the instrument, and of the mode of using it, is also given in the Introduction to the "Bombay Magnetical and Meteorological Observations, 1865-1870," pp. lvi to lix, and the following additional or corrective remarks will make it applicable to the observations of 1900 and 1901:—

(*a*) The place of observation has been the top room of the Electrometer Tower, the dip circle having been placed on the same pillar on which the Kew Unifilar Magnetometer is placed in the regular observations of absolute horizontal force and absolute declination. The reading of the azimuth circle of instrument, No. 49, adopted for this place has invariably been 63° 31′, and of the new instrument, No. 110, by Dover Charlton, is 59° 36′, determined in February 1897. An observation for the verification of the former reading was made on the 22nd February 1881.

(*b*) The dip needles used during the years 1900 and 1901 with the old instrument have been as follow:—

For the regular observations:—

Dover Charlton No. 1.

„ „ No. 2.

And for supplementary observations:—

Dover No. 1.

„ No. 2.

(*b*1) And with the new instrument the needles used were as follow:—

Dover No. 1.

„ No. 2.

(*c*) The final cleaning of the axles of the needles has throughout been made with a clean silk cloth.

8. Processes of Reduction and Description of the Tables of Meteorological Results, 1900 and 1901.

Pressure of Vapour and additional capacity of the Air.—Having obtained, from the tabulations of the barograms and thermograms, hourly values of barometric pressure, temperature of the air, and temperature of evaporation, the pressure of vapour was calculated for each hour with the aid of a table by the formula

$$f'' = f' - \cdot 01147\,(t - t')\times\frac{P - f'}{30}$$

in which t and t' denote the temperatures of the air and wet bulb thermometers respectively, f'' and f' the pressure of vapour at the temperature of the dew point and at temperature t', and P the barometric pressure. The values of the pressure of vapour at different temperatures were taken from the following table, the numbers in which have been extracted from Boileau's Collection of Tables:—

Table 1.—*Regnault's values of the Pressure of Vapour at different Temperatures.*

Temperature.	Pressure of vapour.	Temperature.	Pressure of vapour.	Temperature.	Pressure of vapour.	Temperature.	Pressure of vapour.	Temperature.	Pressure of vapour.	Temperature.	Pressure of vapour.	Temperature.	Pressure of vapour.	Temperature.	Pressure of vapour.
o	Inch.	o	Inch.	o	Inch.	o	Inch.	o	Inch.	o	Inch.	o	Inch.	o	Inch.
35	·204	43	·278	51	·374	59	·500	67	·662	75	·868	83	1·128	91	1·455
36	·212	44	·288	52	·388	60	·518	68	·685	76	·897	84	1·165	92	1·501
37	·220	45	·299	53	·403	61	·537	69	·709	77	·927	85	1·203	93	1·548
38	·229	46	·311	54	·418	62	·556	70	·733	78	·958	86	1·242	94	1·597
39	·238	47	·323	55	·433	63	·576	71	·758	79	·990	87	1·282	95	1·647
40	·248	48	·335	56	·449	64	·596	72	·784	80	1·023	88	1·324	96	1·698
41	·257	49	·348	57	·466	65	·617	73	·811	81	1·057	89	1·366	97	1·751
42	·267	50	·361	58	·482	66	·639	74	·839	82	1·092	90	1·410	98	1·805

To find the additional capacity of the air, the pressure of vapour was deducted from the number in the above table standing opposite to the temperature of the air.

Barometric Pressure.—In Table I for each year is shown, for every day in the year, the mean of 24 hourly tabulations of the barograph, corrected* to

* In the manner described in paragraph 54 of the Introduction to the "Bombay Magnetical and Meteorological Observations for 1871 to 1878."

agree with Newman's barometer No. 58: also, the mean pressure for each month and each year, and the excess of each monthly mean above the annual mean for the same year; and the principal features of the annual variation are indicated at the foot of the table. The maximum and minimum daily pressures in each month are distinguished by being printed in strong figures.

Temperature of the Air, &c.—The plan of the following tables is the same as that of Table I, but the subjects of them, the sources from which the numbers are obtained, and the mode of obtaining them, are as stated below:—

Table II.—Temperature of the air: derived from hourly tabulations of the thermograph dry-bulb.

Table III.—Pressure of vapour: derived from hourly tabulations of the thermograph dry-bulb and wet-bulb, and of the barograph; and calculated in the manner described above.

Table IV.—Additional capacity of the air: derived from hourly differences between the pressure of vapour corresponding to the temperature of the air and the calculated actual pressure of vapour.

Table VII.—Velocities of the north and east components of the wind: derived from hourly tabulations from the register of the Robinson-Beckley anemograph.

Table VIII.—Velocity of the wind regardless of direction: derived from hourly tabulations from the register of the Robinson-Beckley anemograph.

Table VIII *a*.—Velocity of the wind: derived from hourly tabulations from the register of the Dines's anemometer.

Table XI.—Extent of cloudy sky: derived from estimations made at the hours 6, 10, 14, 16 and 22 daily.

Tables VI and XII are on the same plan as Table I, except that the entries made in them are aggregates—daily, monthly and yearly—instead of mean values; and they are sufficiently explained by their several headings.

Monthly and annual range of variation of Meteorological Elements.—Table V shows the extreme limits between which the oscillations of barometric pressure, temperature of the air, pressure of vapour, and additional capacity of the air were confined in each month and in the whole year, and also the ranges of the respective oscillations.

The numbers in Table IX are derived from hourly tabulations from the register of the Robinson-Beckley anemograph. The temperatures of the ground given in Table X are derived from the readings of the several thermometers, made five times a day as regards the 1 inch and 9 inches deep thermometers, and once a day as regards the 20 inches, 60 inches and 132 inches deep thermometers. The five-day means of Table XIII are derived from hourly tabulations of the barograph (combined with readings of Newman's barometer No. 58) and thermograph, from the measurements in Newman's rain-gauge, and from hourly tabulations from the register of the Robinson-Beckley anemograph. The rainfall of Table XIV, for 1900, is that received in Newman's gauge. In other respects these tables require no explanation beyond their titles, the headings of the several columns, and the foot-notes.

9. Notes on instrumental changes and on all irregularities or departures from the routine of observation or reduction in 1900 and 1901.

Robinson-Beckley Anemograph.—The external parts were painted on May 22 and November 6, 1900, and May 31 and November 21, 1901. The driving clock

was found stopped on December 18, 1900, owing to ants having got into the wheel-work. The aggregate of all the interruptions of the instrument in the years 1900 and 1901 due to the above causes was $4^h\ 1^m$: the loss of record was, however, rarely complete, and values partly or entirely interpolated have been inserted whenever the interruption was not prolonged. In all cases the interruptions were of short duration and were substituted by values obtained from Dines's record from the constant factor determined for the two instruments. No complete day's record has been omitted in the formation of monthly abstracts.

Dines's Anemometer.—The sensibility of the instrument is determined by a weight of 16 grains which produces a displacement of the pen, measuring about one mile on the chart. Whenever this falls to about half a mile the instrument is opened, cleaned and the accumulated scum removed. The instrument was so cleaned on the 30th of April and the 20th of November 1900. The aggregate of all the interruptions of the instrument in the years 1900 and 1901 was $2^d\ 10^h\ 58^m$, principally due to adjustment of the instrument, to casual failure of the pen to record the fluctuations, to re-adjustment of the inclination of pen, and, on one occasion, to contact of the glass cover with the cylinder. On a few occasions when the wind velocity was very weak and fell near to zero the record appeared to be faulty and had to be interpolated, and is not included in the above aggregate. No complete day's record has been omitted in the formation of monthly abstracts, as there was no seriously continuous loss of record in any one day, and the short interruptions were made good by interpolation from Robinson-Beckley's record by the constant determined for the two instruments. Short interruptions caused by the regular change of paper every day for both anemometers, if not unusually prolonged, are not included in the above aggregate.

Method of interpolation in photographic tabulations.—When for any reason the traces furnished by the photographic self-registering instruments are interrupted, and the interruption includes the moments when one or more hourly tabulations should be made, these last are either substituted by the corresponding eye-observations if the hours happen to be any of the five regular observation hours or if special eye-observations are taken for the purpose, but, if no eye-observations are available, they are interpolated. Interpolation is resorted to rarely and only in case of accidents, otherwise, eye-observations are always made so as to keep the record unbroken. If the interruption lasts for less time than one hour, the interpolation is made on the assumption that the rate of change of the phenomenon from its value at the beginning to its value at the end of the interruption was uniform, provided that the parts of the curve immediately preceding and immediately following the gap are, in appearance, continuations of the straight line connecting the extremities of the gap. If the last condition is not satisfied, or if the gap, taking account of points inserted by means of eye-observations, is of greater length than one hour, the interpolation is made between the next preceding and the next following hourly entries, first, by allowing for the known *normal* rate of change of the phenomenon between those hours in the same month, and then by assuming that any additional change, shown by the difference between the values of the phenomenon at the two extreme hours, has grown at a uniform rate. Interpolated values are entered in the abstract sheets with enclosing square brackets, inserted eye-observations between parentheses.

Barograph.—No tabulations were obtained for the following hours for the several reasons stated, but eye-observations were available and were adopted for the hours marked within parentheses, in all cases except in one, when interpolation had to be resorted to :—

(1) The clock was taken to pieces for cleaning on 1900, April 25^d (14^h to 17^h); and 26^d (15^h to 18^h);

(2) Interruptions in and stoppage of the bi-hourly stop arrangement and its rectification: on 1900, May 6^d (11^h) and 9^d 4^h.

(3) Owing to failure of light: on 1900, June 28^d (6^h).

Occasional, though rare, failure of bi-hourly stops to act has caused no loss of record.

The aggregate of all the interruptions of the barograph in the years 1900 and 1901 was 11^h 55^m, and the number of hourly tabulations lost was 11, and of these 10 were substituted by eye-observations, leaving only one to be interpolated. Short interruptions caused by the regular change of photographic paper and by change of lamps, if not unusually prolonged, are not included in the above aggregate, nor in the aggregates of interruptions of the thermographs that follow further on.

Thermograph dry-bulb.—No tabulations were obtained for the following hours for the several reasons stated, but eye-observations were available and were adopted for the hours marked within parentheses, in all cases except in two, when interpolation had to be resorted to:—

(1) Stoppage of the clock due to faulty action of bi-hourly fan: on 1900, April 24^d (1^h).

(2) The cleaning of the clock: on 1900, April 25^d (11^h to 14^h), May 6^d (10^h and 11^h), 1901 May 4^d (22^h and 23^h) and 5^d (0^h).

(3) The stoppage of the clock owing to the loosening of the fastener of the sensitive paper on the cylinder: on 1900, August 12^d (4^h and 5^h).

(4) Raising of the thermometers to prevent loss of curve of the wet-bulb thermograph owing to low temperature: on 1901, February 12^d (14^h).

(5) Interruption in and stoppage of the bi-hourly stop arrangement and its rectification: on 1901, December 23^d (22^h) and 29^d (10^h).

Occasional, though rare, failure of the bi-hourly stops to act has caused no loss of record.

The aggregate of all the interruptions of the thermograph dry-bulb in the years 1900 and 1901 was 18^h 40^m, and the number of hourly tabulations lost was 15 and of these 13 were substituted by eye-observations, leaving only 2 to be interpolated.

Thermograph wet-bulb.—No tabulations were obtained for the following hours for the several reasons stated, but eye-observations were available and were adopted for the hours marked within parentheses, in all cases except in two, when interpolation had to be resorted to:—

(1) Stoppage of the clock due to faulty action of the bi-hourly fan: same as for dry-bulb.

(2) Cleaning of the clock: same as for dry-bulb.

(3) Stoppage of the clock owing to the loosening of the fastener of the sensitive paper on the cylinder: same as for dry-bulb.

(4) Raising of the thermometers to prevent loss of curve of the wet-bulb thermograph owing to low temperature: same as for dry-bulb.

(5) Interruption in and stoppage of the bi-hourly stop arrangement and its rectification: same as for dry-bulb.

(6) Loss of curve due to low temperature: on 1901, February 8^d (4^h to 8^h).

Occasional, though rare, failure of the bi-hourly stops to act has caused no loss of record.

The aggregate of all the interruptions of the thermograph wet-bulb in the years 1900 and 1901 was $1^d\ 20^h\ 30^m$, due to the causes mentioned above and to the short intervals of time occupied in cleaning and renewing the muslin coverings of the bulbs and the bundles of threads connecting them with the supply of water. The number of hourly tabulations lost was 20 and of these 18 were substituted by eye-observations, leaving only 2 to be interpolated.

Self-registering Rain-gauge.—No hourly tabulations were lost in the years 1900 and 1901.

N. A. F. MOOS,
Director.

Coldba Observatory, October 1902.

TABLES OF RESULTS

DERIVED

FROM THE CONTINUOUS REGISTRATIONS OF AUTOMATIC METEOROLOGICAL INSTRUMENTS

AND FROM

METEOROLOGICAL OBSERVATIONS,

1900 AND 1901.

TABLES OF RESULTS

DERIVED FROM THE

METEOROLOGICAL OBSERVATIONS MADE DAILY AT 6, 10, 14, 16 AND 22 HOURS,

1900 AND 1901.

FIVE-DAY MEANS,

1900 AND 1901.

TABLES OF

PRINCIPAL SEISMIC DISTURBANCES RECORDED BY MILNE'S AND COLABA SEISMOGRAPHS,

1900 AND 1901.

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Table I.—Barometric Pressure, 1900.

Height of Barometer above mean Sea-level = 37 feet.

1900. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	29·937	29·945	29·914	**29·885**	29·771	29·793	29·613	29·644	29·779	29·873	**29·943**	29·881
2	·898	·919	·956	·835	**·752**	·807	·664	**·549**	·767	·836	·911	·920
3	·891	·919	·953	·822	·759	**·835**	·683	·549	·772	·816	·904	·899
4	·922	·943	·927	·830	·785	·831	·684	·592	·795	·801	·904	**·850**
5	·974	·910	·941	·844	·812	·806	·701	·626	·839	·812	·912	·852
6	·973	·896	·964	·860	·849	·761	·711	·606	·883	·816	·901	·861
7	·897	·947	·933	·859	·849	·711	·658	·589	·856	·816	·888	·918
8	**·844**	·958	·890	·849	·850	·684	·637	·571	·799	**·793**	·854	·960
9	·922	·924	·881	·814	·847	·628	·633	·571	·756	·796	**·837**	·968
10	·948	·951	·923	·843	·884	·588	·622	·622	·764	·820	·845	·975
11	·931	**·960**	**·967**	·825	**·894**	·580	·616	·685	·755	·868	·857	·988
12	·929	·926	·942	·808	·866	**·566**	·574	·650	·734	·886	·886	30·005
13	·936	·893	·893	·808	·874	·596	**·540**	·594	·740	·860	·898	29·988
14	·972	**·888**	·821	·863	·880	·603	·588	·618	·789	·840	·884	·982
15	·990	·910	·827	·844	·873	·611	·679	·681	·806	·853	·887	·974
16	30·008	·891	·833	·801	·802	·647	·712	·735	·794	·866	·892	·944
17	·015	·914	·851	**·768**	·795	·677	·679	**·795**	·794	·885	·855	·984
18	**·018**	·912	·856	·792	·854	·683	·653	·788	·800	·913	·871	**30·012**
19	29·968	·933	·858	·824	·855	·685	·676	·759	·808	·926	·874	29·955
20	·960	·927	·855	·835	·862	·686	·742	·721	·830	·924	·867	·909
21	·978	·922	·834	·818	·840	·713	**·748**	·709	·847	·935	·884	·934
22	·963	·892	·859	·815	·828	·703	·706	·742	·820	·909	·910	·973
23	·953	·924	·881	·794	·798	·684	·709	·790	·750	·872	·884	·963
24	30·014	·941	·907	·777	·806	·667	·692	·739	**·733**	·847	·868	·981
25	29·944	·955	·909	·779	·791	·689	·671	·688	·772	·844	·869	·940
26	·867	·934	·947	·822	·765	·706	·642	·685	·820	·898	·863	·925
27	·884	·917	·949	·830	·758	·664	·581	·729	·857	·931	·868	·960
28	·936	·906	·858	·831	·771	·666	·577	·741	·892	·901	·865	·913
29	·947		**·814**	·809	·789	·667	·703	·768	·882	·919	·859	·886
30	·927		·865	·785	·824	·645	·700	·788	**·894**	·979	·861	·888
31	·955		·907		·818		·677	·788		**·985**		·881
Monthly Mean.	**29·945**	29·923	29·894	29·822	29·822	29·686	**29·660**	29·681	29·805	29·872	29·880	29·938
Annual Variation	+·118	+·096	+·067	−·005	−·005	−·141	−·167	−·146	−·022	+·045	+·053	+·111

	in.
Annual mean	29·827
The greatest mean daily barometric pressure in the year (that of 18th January) was	30·018
The least do. do. do. (that of 13th July) was	29·540
Difference =	0·478

TABLE II.—Temperature of the Air, 1900.

1900. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	°	°	°	°	°	°	°	°	°	°	°	°
1	76·2	**72·1**	75·4	79·5	**85·3**	85·6	80·1	**77·4**	80·5	81·5	80·9	79·1
2	75·2	73·3	75·9	79·2	84·7	85·7	83·9	79·9	**78·1**	81·7	80·4	80·5
3	75·0	73·5	76·2	**78·3**	83·8	85·7	84·1	80·6	81·1	81·4	80·9	**81·9**
4	75·0	73·1	75·3	79·7	83·4	85·7	**84·4**	81·4	80·8	80·6	**81·8**	80·4
5	74·8	73·8	**74·7**	80·0	83·9	85·8	83·9	81·5	81·4	80·2	81·8	79·0
6	75·3	73·6	76·2	80·0	84·2	86·5	82·0	79·3	81·7	80·1	80·2	78·0
7	74·8	74·4	77·0	79·4	83·6	86·7	83·1	80·7	81·0	79·7	79·6	79·1
8	73·2	74·6	77·5	79·9	83·8	87·3	83·4	80·7	81·2	80·2	78·8	79·0
9	73·3	75·4	78·0	80·2	83·4	85·3	83·0	79·4	80·8	80·2	78·6	78·5
10	73·4	75·6	79·2	80·7	83·3	84·8	82·5	79·9	79·8	80·3	78·7	77·9
11	76·3	74·2	81·6	81·4	**82·4**	86·1	82·6	80·9	80·3	81·0	78·5	78·3
12	**76·8**	72·1	**82·5**	82·4	83·3	86·2	81·8	79·7	81·6	79·8	79·4	79·7
13	76·5	72·1	82·2	82·7	84·8	86·8	80·2	77·9	81·0	80·4	78·6	80·2
14	75·4	72·3	79·9	82·0	84·7	**87·5**	82·1	78·4	81·5	80·8	**78·4**	79·5
15	74·1	73·1	79·9	81·5	84·5	87·2	82·4	79·4	81·7	80·9	79·2	78·6
16	71·7	73·9	79·7	82·1	84·3	87·3	83·1	80·7	81·0	81·5	79·4	78·5
17	69·7	74·0	79·4	81·6	84·2	87·3	82·9	81·5	**81·8**	80·7	79·7	79·3
18	69·8	73·6	78·7	82·8	84·0	87·1	82·6	81·5	81·8	81·5	80·4	78·8
19	72·8	74·0	78·6	83·6	84·3	86·9	82·0	81·0	81·0	80·9	80·5	78·3
20	75·6	74·7	78·5	**84·1**	84·3	86·6	82·7	80·9	78·1	80·0	80·2	76·1
21	74·9	75·8	77·9	83·8	84·5	86·9	83·5	81·1	79·6	79·0	80·8	75·6
22	72·6	75·7	78·9	83·6	84·5	87·0	83·8	**81·7**	80·6	**78·7**	81·5	77·3
23	69·2	75·1	78·8	83·5	84·8	85·8	82·8	81·6	81·3	80·1	80·6	78·1
24	**68·4**	74·2	78·3	83·6	84·9	83·1	82·1	81·2	80·5	82·0	81·2	77·4
25	69·8	75·1	78·2	83·1	85·0	79·6	83·0	80·3	80·1	82·9	80·5	75·8
26	71·0	75·5	78·6	83·2	85·1	80·1	83·9	80·9	80·1	**84·1**	79·9	74·4
27	71·9	**76·2**	79·5	83·9	84·9	81·0	83·1	81·3	81·1	81·2	79·6	74·4
28	72·0	76·2	80·1	84·1	84·4	**76·8**	80·5	81·7	80·9	81·2	79·9	**73·5**
29	71·5		80·7	83·3	84·7	80·5	80·1	80·3	81·0	82·9	80·1	75·9
30	72·1		81·2	84·1	84·8	80·9	81·9	80·2	80·7	82·6	79·2	77·4
31	71·9		80·2		84·8		**78·1**	79·1		81·1		77·5
Monthly Mean.	**73·2**	74·2	78·7	81·9	84·3	**85·0**	82·4	80·4	80·7	80·9	80·0	78·0
Annual Variation ...	−6·8	−5·8	−1·3	+1·9	+4·3	+5·0	+2·4	+0·4	+0·7	+0·9	0·0	−2·0

	°
Annual mean	80·0
The greatest mean daily temperature of the air in the year (that of 14th June) was	87·5
The least do. do. do. (that of 24th January) was	68·4
Difference =	19·1

Table III.—Pressure of Vapour, 1900.

1900. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	0·602	0·564	0·701	0·802	0·866	0·910	0·948	**0·858**	0·878	**0·917**	0·725	0·697
2	·594	·507	·731	·764	·868	·911	**·988**	·899	·867	·892	·710	·741
3	·566	·473	·660	**·752**	·908	·908	·973	·934	·900	·838	·700	·731
4	·619	**·469**	**·644**	·777	·907	·917	·957	·938	·889	·810	**·611**	·740
5	·638	·486	·663	·807	·844	·890	·954	**·948**	·896	·781	·670	·716
6	·608	·583	·714	·817	·835	·915	·940	·913	·887	·805	·739	·684
7	·564	·644	·656	·808	·832	·931	·946	·929	·885	·869	·727	·750
8	·567	·633	·725	·806	·807	·981	·950	·930	·888	·915	·701	·715
9	·541	·597	·722	·793	·826	1·008	·946	·922	·888	·904	·708	·713
10	·489	·676	·807	·796	·879	0·954	·947	·930	·885	·857	·691	·632
11	·615	·550	·801	·842	·815	·945	·937	·930	·895	·764	·679	·640
12	·729	·575	·752	·872	**·781**	1·033	·949	·912	·885	·730	·684	·694
13	**·746**	·549	·720	·811	·882	·021	·934	·895	·866	·781	·708	·676
14	·636	·584	·818	·883	·910	**·036**	·962	·899	·867	·805	·780	·666
15	·587	·641	·742	·830	·894	·024	·960	·899	·870	·797	·783	·663
16	·508	·650	·663	·802	·875	·021	·953	·926	·886	·798	**·812**	·632
17	·457	·647	·705	·868	·877	·011	·939	·934	·892	·763	·781	·629
18	·419	·632	·799	·913	·861	0·995	·929	·904	**·843**	·749	·781	·643
19	·499	·632	·791	**·939**	·897	·978	·945	·906	·858	·719	·775	·658
20	·642	·539	·693	·913	·899	·941	·935	·895	·879	·769	·738	·606
21	·611	·578	·741	·918	·869	·984	·934	·888	·884	·796	·690	·598
22	·464	·653	·775	·922	·902	·933	·933	·900	·886	·803	·659	·702
23	·394	·648	·761	·915	·870	·936	·943	·907	·918	·815	·656	·753
24	**·383**	·651	·742	·892	·848	·934	·953	·894	**·941**	·727	·688	·708
25	·411	·666	·681	·850	·908	·909	·959	·884	·924	**·606**	·749	·577
26	·510	·662	·735	·850	**·931**	·902	·956	·882	·927	·730	·756	**·553**
27	·579	**·700**	·782	·855	·928	·917	·975	·912	·914	·896	·747	·599
28	·606	·692	·816	·838	·896	**·850**	·919	·895	·901	·916	·762	·575
29	·585		**·824**	·831	·913	·902	·895	·870	·869	·877	·781	·682
30	·597		·796	·900	·899	·917	·911	·878	·861	·788	·746	·752
31	·610		·814		·866		**·876**	·864		·764		**·760**
Monthly Mean...	0·**561**	0·603	0·741	0·846	0·874	**0·949**	0·943	0·906	0·888	0·806	0·725	0·674
Annual Variation ...	−·232	−·190	−·052	+·053	+·081	+·156	+·150	+·113	+·095	+·013	−·068	−·119

	in.
Annual mean	0·793
The greatest mean daily pressure of vapour in the year (that of 14th June) was	1·036
The least do. do. do. (that of 24th January) was	0·383
Difference =	0·653

TABLE IV.—Additional Capacity of the Air, 1900.

1900. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	0·306	0·228	0·180	0·209	0·355	0·318	**0·081**	0·082	0·165	0·161	0·334	0·305
2	·286	·318	**·166**	·237	·328	·324	·174	·124	·093	·196	·332	·304
3	·308	**·357**	·246	·217	·252	·325	·198	·111	·162	·238	·358	·364
4	·257	·350	·235	·241	**·237**	·314	·224	·135	·162	·240	**·481**	·299
5	·231	·355	·198	·220	·321	·346	·208	·128	·179	·255	·421	·278
6	·275	·249	·192	·209	·343	**·353**	·154	·087	·196	·227	·296	·279
7	·304	·211	·277	**·200**	·324	·344	·187	·117	·173	·146	·291	·246
8	·255	·228	·223	·218	·353	·315	·193	·119	·175	**·119**	·291	·282
9	·282	·290	·240	·239	·320	·208	·182	·080	·164	·130	·277	·266
10	**·342**	·212	·194	·256	·264	·244	·165	·091	·132	·182	·299	·330
11	·302	·299	·281	·235	·294	·304	·180	·124	·140	·302	·302	·335
12	·196	·214	·367	·241	**·363**	·220	·139	·101	·196	·292	·329	·328
13	**·169**	·243	**·386**	·311	·318	·255	·098	**·060**	·194	·262	·276	·360
14	·246	·215	·208	·213	·285	·270	·133	·072	·210	·251	**·195**	·347
15	·256	**·176**	·284	·247	·294	·270	·148	·105	·214	·262	·220	·319
16	·270	·190	·356	·294	·305	·278	·180	·123	·172	·285	·195	·351
17	·271	·195	·305	·214	·299	·285	·188	·143	·193	·292	·239	**·377**
18	·311	·199	·186	·210	·307	·293	·187	·172	**·242**	·332	·259	·354
19	·319	·213	·188	·215	·285	·305	·148	·148	·200	·343	·271	·313
20	·252	·328	·284	·259	·279	·327	·185	·159	**·082**	·260	·298	·298
21	·256	·317	·218	·245	·317	·340	·213	·174	·129	·199	·368	·291
22	·338	·239	·214	·234	·286	·351	**·226**	·185	·158	·183	·421	·241
23	·322	·226	·227	·235	·327	·300	·179	·172	·150	·218	·393	·214
24	·315	·195	·227	·262	·353	·205	·146	·170	·099	·376	·380	·235
25	·325	·207	·287	·284	·298	·103	·173	·150	·103	**·524**	·301	·319
26	·255	·224	·246	·288	·280	·125	·207	·173	·100	·445	·269	·301
27	·208	·206	·229	·308	·272	·141	·158	·158	·148	·168	·268	·256
28	·182	·215	·214	**·333**	·289	**·073**	·122	**·187**	·154	·151	·263	·257
29	·190		·226	·309	·282	·140	·135	·165	·191	·255	·250	·217
30	·195		·271	·271	·301	·140	·180	·156	·189	·335	·255	·191
31	·176		·221		·332		·086	·117		·306		**·185**
Monthly Mean.	0·265	0·246	0·244	0·249	**0·305**	0·261	0·167	**0·132**	0·162	0·256	0·304	0·292
Annual Variation ..	+·025	+·006	+·004	+·009	+·065	+·021	−·073	−·108	−·078	+·016	+·064	+·052

	in.
Annual mean	0·240
The greatest mean daily additional capacity of the air in the year (that of 25th October) was ...	0·524
The least do. do. do. (that of 13th August) was ...	0·060
Difference =	0·464

Maxima and Minima of different Meteorological Elements, 1900.

TABLE V.—*In which are collected the individual observations in each month of the year, which showed the greatest and the least values of the following elements, viz., Height of Barometer, corrected for Temperature; Temperature of Air; Pressure of Vapour; and Additional Capacity of Air.*

1900.	HEIGHT OF BAROMETER.			TEMPERATURE OF AIR.			PRESSURE OF VAPOUR.			ADDITIONAL CAPACITY.		
Month.	Greatest.	Least.	Range.	Greatest.	Least.	Range.	Greatest.	Least.	Range.	Greatest.	Least.	Range.
	in.	in.	in.	°	°	°	in.	in.	in.	in.	in.	in.
January ...	30·094	29·784	0·310	84·7	62·8	21·9	0·792	0·256	0·536	0·736	0·067	0·669
February .	·042	·822	·220	81·4	66·7	14·7	·804	·305	·499	·631	·057	·574
March ...	·033	·742	·291	89·4	70·9	18·5	·935	·475	·460	·702	·062	·640
April ...	29·953	·704	·249	88·8	75·1	13·7	·974	·665	·309	·547	·086	·461
May ...	·949	·681	·268	90·1	78·5	11·6	·976	·717	·259	·557	·130	·427
June ...	·894	·501	·393	91·8	75·3	16·5	1·088	·807	·281	·519	·019	·500
July ...	·798	·494	·304	87·8	75·5	12·3	·027	·811	·216	·354	·033	·321
August ...	·843	·487	·356	84·9	76·1	8·8	·001	·777	·224	·309	·030	·279
September.	·953	·674	·279	84·9	76·0	8·9	0·969	·797	·172	·329	·050	·279
October ...	30·059	·733	·326	91·3	73·6	17·7	·976	·497	·479	·898	·045	·853
November.	·020	·781	·239	90·4	73·3	17·1	·888	·416	·472	·936	·078	·858
December .	·083	·785	·298	88·3	67·8	20·5	·837	·451	·386	·755	·072	·683
Year ...	30·094	29·487	0·607	91·8	62·8	29·0	1·088	0·256	0·832	0·936	0·019	0·917

Rainfall, 1900.

TABLE VI.—*Total fall of rain (in inches) as measured by F. Chambers's Self-registering Gauge, the funnel of which is 28 feet above the ground.*

1900.	MONTH.											
Date.	January.	February.	March.	April	May.	June.	July.	August.	September.	October.	November.	December
						in.	in.	in.	in.			
1	...	...	...	...	...	...	3·06	1·89	0·53	...	...	...
2	...	...	...	...	...	...	0·04	0·48	1·88	...	...	...
3	...	...	...	...	...	...	0·23	0·41	0·10	...	...	...
4	...	...	...	...	...	...	0·16	0·07	...	...	...	...
5	...	...	...	...	...	...	0·01	0·77	0·07	...	...	...
6	...	...	...	...	...	...	0·72	2·08	...	...	...	...
7	...	...	...	...	...	...	0·09	0·28	0·05	...	...	...
8	...	...	...	...	...	...	0·14	0·72	0·09	...	...	...
9	...	...	...	...	...	0·27	0·12	0·42	0·31	...	...	...
10	...	...	...	...	...	0·02	0·30	0·87	0·28	...	...	...
11	...	...	...	...	...	...	0·49	0·26	0·21	...	...	...
12	...	...	...	...	...	0·51	1·59	1·27	...	...	...	...
13	...	...	...	...	...	...	4·63	2·12	0·32	...	...	...
14	...	...	...	...	...	...	0·27	1·74	...	...	...	...
15	...	...	...	...	...	...	0·34	0·80	...	...	...	...
16	...	...	...	...	...	0·04	0·13	0·29	0·43	...	...	...
17	...	...	...	...	...	0·01	0·04	...	0·12	...	...	...
18	...	...	...	...	...	...	...	...	...	...	...	...
19	...	...	...	...	...	...	0·10	0·02	0·06	...	...	...
20	...	...	...	...	...	...	...	0·35	1·19	...	...	...
21	...	...	...	...	...	...	0·02	0·07	0·52	...	...	...
22	...	...	...	...	...	...	...	0·01	0·04	...	...	...
23	...	...	...	...	...	0·03	0·75	0·06	0·04	...	...	...
24	...	...	...	...	...	1·24	0·50	0·26	0·50	...	...	...
25	...	...	...	...	...	3·98	...	0·53	0·12	...	...	...
26	...	...	...	...	...	3·10	...	0·06	0·50	...	...	...
27	...	...	...	...	...	0·73	0·80	0·24	...	...	...	...
28	...	...	...	...	...	6·75	0·78	0·01	...	...	...	...
29	...		...	...	...	0·12	1·36	0·16	...	...	...	...
30	...		...	...	...	0·86	0·21	0·23	...	...	...	...
31	...		...		...		7·66	0·56		...		...
Monthly Total.	...	...	...	...	...	17·66	24·54	17·03	7·36	...	...	...
Number of rainy days.	...	...	...	...	...	13	26	29	20	...	...	...

Total fall of rain in the year ... ... 66·59 inches
Total number of rainy days in the year 88
The greatest daily fall of rain in the year (that of 31st July) was ... ... 7·66 inches
No rain fell in the months of January, February, March, April, May, October, November and December, nor on any of the days left blank in the above table.

Mean Daily Velocities of the North and East Components of the Wind, 1900.

TABLE VII.—*Showing the Mean Velocities of the North or South and East or West Components of the Winds which blew on each day of the year 1900.*

In Miles per Hour.

1900. Date.	MONTH.																							
	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.
1	8·2 N	2·0 W	7·5 N	1·5 W	3·7 N	5·8 W	7·4 N	7·1 W	0·2 N	3·3 W	1·5 N	6·7 W	2·0 S	16·6 W	4·7 S	25·6 W	2·7 S	13·0 W	8·7 N	4·0 W	5·1 N	0·8 E	4·3 N	1·7 W
2	8·8 N	0·8 W	12·0 N	3·4 W	3·4 N	4·1 W	10·4 N	6·3 W	2·4 N	5·5 W	3·3 N	7·3 W	1·5 S	20·9 W	7·0 S	24·7 W	1·7 S	11·0 W	6·7 N	3·2 W	6·8 N	0·6 E	2·8 N	1·3 E
3	7·8 N	0·4 W	11·6 N	2·2 W	6·7 N	6·0 W	7·7 N	4·8 W	5·2 N	7·7 W	7·3 N	9·9 W	5·4 S	15·3 W	6·5 S	21·9 W	1·1 N	13·1 W	4·2 N	1·6 W	5·0 N	1·0 E	2·8 N	1·1 E
4	0·2 N	0·9 E	11·6 N	2·7 W	9·0 N	4·6 W	8·1 N	6·1 W	5·3 N	7·8 W	3·9 N	7·6 W	5·5 S	16·5 W	5·1 S	22·0 W	0·4 N	14·0 W	6·4 N	0·7 W	8·6 N	1·4 E	2·8 N	0·4 E
5	7·0 N	2·5 W	10·1 N	2·6 W	10·0 N	5·9 W	5·3 N	4·3 W	2·0 S	6·4 W	0·4 N	7·2 W	0·3 S	20·4 W	4·2 S	20·4 W	0·2 N	14·7 W	7·4 N	1·2 W	5·9 N	0·7 E	6·9 N	1·2 W
6	7·4 N	2·7 W	5·9 N	2·6 W	9·0 N	5·6 W	0·6 N	5·2 W	1·4 S	5·3 W	2·8 S	9·4 W	0·8 N	17·9 W	5·1 S	18·5 W	1·1 N	14·0 W	7·2 N	4·3 W	3·7 N	1·0 E	2·8 N	0·7 W
7	10·0 N	5·5 W	2·2 N	1·5 W	9·7 N	5·3 W	3·4 N	6·4 W	3·9 N	5·9 W	2·9 S	11·0 W	0·5 N	15·0 W	2·3 S	18·6 W	1·7 N	14·0 W	4·2 N	3·5 W	4·1 N	0·3 E	0·0	5·4 E
8	5·6 N	2·4 W	5·1 N	3·9 W	4·5 N	3·5 W	1·8 N	5·5 W	8·4 N	6·2 W	3·3 S	8·1 W	0·2 N	15·6 W	4·6 S	17·4 W	2·0 N	13·2 W	3·0 N	3·9 W	5·9 N	2·6 E	3·5 N	0·1 W
9	6·7 N	0·9 W	9·3 N	3·7 W	2·7 N	3·2 W	1·1 N	5·2 W	5·1 N	5·6 W	7·9 S	3·3 W	0·0	18·9 W	0·0	8·9 W	2·9 N	9·9 W	2·9 N	4·2 W	4·7 N	1·3 E	4·3 N	0·1 E
10	7·1 N	0·7 W	6·5 N	5·5 W	3·0 S	3·1 W	5·6 N	5·4 W	1·3 N	7·3 W	4·6 S	2·6 W	2·6 S	13·6 W	5·2 S	15·4 W	0·6 N	6·6 W	4·4 N	1·9 W	4·9 N	2·9 E	7·6 N	1·0 W
11	2·2 N	2·0 E	11·3 N	6·5 W	2·3 N	3·9 W	11·6 N	6·7 W	3·6 N	6·3 W	2·6 S	2·4 W	2·0 S	16·1 W	6·0 S	14·3 W	0·4 N	5·6 W	8·0 N	4·3 E	4·9 N	1·2 E	3·0 N	0·2 W
12	0·2 S	0·8 W	9·6 N	5·7 W	2·1 N	2·8 W	9·1 N	5·5 W	0·1 N	5·8 W	3·4 S	6·5 W	5·9 S	24·0 W	2·7 S	22·3 W	0·8 N	11·1 W	6·4 N	0·5 E	3·6 N	3·7 E	4·4 N	1·6 E
13	1·7 N	4·0 W	9·2 N	4·4 W	3·5 N	2·4 W	3·5 N	4·5 W	1·2 S	7·0 W	2·2 S	14·0 W	0·6 N	25·0 W	1·4 S	26·3 W	0·7 N	8·8 W	5·7 N	1·0 E	2·9 N	0·3 E	4·8 N	0·7 E
14	5·6 N	1·7 W	3·4 N	3·3 W	0·6 N	4·5 W	3·0 S	5·7 W	2·8 N	7·0 W	5·9 S	10·5 W	0·0	19·0 W	6·5 S	25·4 W	1·2 S	5·7 W	6·6 N	1·9 W	4·1 N	0·6 E	5·5 N	0·8 E
15	4·3 N	1·4 W	1·0 N	2·6 W	4·1 N	5·5 W	2·2 N	5·3 W	6·7 N	7·5 W	7·4 S	11·0 W	0·6 S	18·1 W	6·2 S	21·6 W	0·8 S	5·0 W	2·3 N	1·1 W	1·9 N	0·8 W	3·4 N	1·0 E
16	9·2 N	0·4 W	0·3 S	3·0 W	5·1 N	2·7 W	1·8 N	5·6 W	4·0 N	7·9 W	4·7 S	11·9 W	0·4 S	15·3 W	0·7 S	17·5 W	0·4 N	4·9 W	4·3 N	0·8 E	6·7 N	2·7 W	3·7 N	3·0 E
17	10·5 N	0·5 W	3·8 N	5·7 W	5·9 N	3·9 W	6·2 N	6·7 W	1·1 N	6·5 W	0·7 S	16·7 W	0·8 S	13·3 W	3·0 S	10·6 W	3·6 N	11·2 W	5·5 N	1·7 W	4·8 N	1·1 W	4·6 N	2·3 E
18	12·6 N	0·3 W	5·1 N	3·0 W	6·5 N	6·1 W	0·3 S	6·1 W	3·2 N	6·5 W	0·0	18·5 W	0·3 N	8·1 W	1·3 S	13·1 W	3·5 N	12·3 W	5·8 N	1·9 E	3·1 N	0·0	6·4 N	0·3 E
19	6·7 N	2·4 E	6·7 N	4·7 W	4·3 N	5·9 W	3·0 S	4·6 W	9·0 N	8·7 W	1·6 N	16·6 W	5·7 S	0·7 W	1·1 S	12·6 W	0·8 N	13·0 W	5·4 N	0·3 W	4·0 N	0·3 E	9·0 N	0·9 W
20	3·6 N	0·9 E	8·2 N	3·5 W	8·2 N	5·4 W	5·8 S	4·6 W	8·0 N	8·9 W	0·2 N	13·6 W	3·9 S	2·0 W	1·3 S	14·2 W	2·4 N	4·1 W	3·0 N	1·1 E	4·9 N	0·3 E	10·3 N	2·6 W
21	7·4 N	3·5 W	10·0 N	3·7 W	8·1 N	6·0 W	2·4 S	6·7 W	9·5 N	9·6 W	0·0	9·6 W	1·9 S	6·0 W	4·2 S	12·9 W	2·3 N	5·3 W	4·9 N	1·6 W	4·2 N	2·4 E	7·9 N	1·8 W
22	14·2 N	6·1 W	7·0 N	4·2 W	4·9 N	6·5 W	0·5 S	4·2 W	5·3 N	9·9 W	0·7 S	8·7 W	0·6 N	5·3 W	6·6 S	9·9 W	4·7 N	7·2 W	6·4 N	3·4 W	7·1 N	1·0 E	4·3 N	1·3 W
23	12·3 N	4·3 W	3·8 N	5·4 W	2·1 N	6·0 W	4·2 N	5·1 W	4·2 N	9·4 W	3·0 S	6·4 W	0·2 S	3·4 W	6·0 S	9·9 W	6·2 N	13·7 W	3·0 N	1·0 W	7·8 N	2·1 E	0·9 N	2·1 W
24	11·2 N	0·7 E	7·1 N	4·0 W	3·9 N	5·3 W	4·1 N	5·6 W	0·9 S	6·8 W	2·9 S	6·5 W	1·0 S	1·0 E	3·7 S	14·5 W	5·5 N	14·1 W	8·0 N	2·6 E	5·7 N	0·4 W	7·0 N	4·3 W
25	9·8 N	2·0 W	8·3 N	5·1 W	1·9 N	6·8 W	1·9 N	6·3 W	3·3 N	7·4 W	10·9 S	4·0 W	2·7 S	2·8 E	2·5 S	13·7 W	0·7 N	15·3 W	10·7 N	3·6 E	5·0 N	0·1 W	11·1 N	2·2 W
26	8·7 N	3·3 W	8·8 N	5·2 W	5·6 N	7·6 W	0·4 S	5·1 W	5·1 N	7·9 W	6·0 S	2·6 W	5·3 S	2·1 E	2·3 S	10·9 W	0·3 N	11·3 W	8·5 N	1·3 E	3·8 N	0·1 E	7·1 N	3·6 W
27	1·7 N	1·3 W	6·1 N	5·3 W	7·3 N	7·4 W	4·7 S	5·1 W	4·7 N	8·5 W	7·3 S	4·8 W	2·6 S	3·0 W	4·0 S	5·4 W	1·3 S	6·7 W	3·1 S	5·0 E	0·6 N	1·1 E	6·0 N	0·7 W
28	1·4 N	0·8 W	4·8 N	3·9 W	6·5 N	7·4 W	5·3 S	4·0 W	4·0 N	7·8 W	1·0 S	11·1 W	4·8 S	10·8 W	4·0 S	7·0 W	1·2 S	2·5 W	1·2 N	2·2 W	4·6 N	0·5 W	9·1 N	2·3 W
29	3·9 N	2·0 W			6·5 N	5·3 W	1·8 N	5·6 W	3·6 N	8·5 W	11·7 S	0·9 W	0·9 S	19·7 W	2·4 S	10·0 W	7·0 N	2·6 W	6·3 N	0·4 W	3·5 N	0·9 W	2·7 N	0·8 W
30	2·0 N	1·6 W			8·9 N	7·2 W	6·3 N	6·3 W	1·3 N	5·6 W	10·2 S	4·7 W	1·6 S	23·0 W	0·8 S	8·1 W	7·8 N	3·8 W	2·7 N	2·5 E	5·9 N	2·4 W	1·6 S	3·4 W
31	4·1 N	1·5 W			5·6 N	5·6 W			2·1 N	5·9 W			1·6 S	25·8 W	2·9 S	8·3 W			3·4 N	0·1 W			1·7 N	1·3 E
Monthly Mean ...	6·5 N	1·5 W	7·0 N	3·9 W	5·2 N	5·2 W	2·6 N	5·5 W	3·5 N	7·1 W	2·8 S	8·5 W	1·8 S	13·0 W	3·7 S	15·5 W	1·6 N	9·6 W	5·2 N	0·6 W	4·8 N	0·6 E	4·8 N	0·4 W
Annual Variation ...	3·8 N	4·3 E	4·3 N	1·9 E	2·5 N	0·6 E	0·1 S	0·3 E	0·8 N	1·3 W	5·5 S	2·7 W	4·5 S	7·2 W	6·4 S	9·7 W	1·1 S	3·8 W	2·5 N	5·2 E	2·1 N	6·4 E	2·1 N	5·4 E

The Velocities of the Mean Components for the year are 2·7 N. and 5·8 W.

Velocity of Wind, 1900.

Robinson Beckley's Anemograph.

Table VIII.—*Mean Velocity of the Wind, in miles per hour, without regard to the direction from which it blew, for each Day of Bombay Civil Time; also the Mean Monthly Velocity, and its Variation from the Mean of the year.*

1900.	MONTH.											
Date.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November	December.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1	10·0	9·8	8·2	11·0	8·0	7·0	19·2	26·5	13·6	10·1	10·0	5·9
2	10·1	13·1	7·3	13·6	6·7	8·1	21·2	26·1	11·5	8·0	10·4	7·1
3	9·2	12·4	9·5	10·5	9·9	12·6	16·4	23·2	13·3	6·2	9·9	7·2
4	**4·9**	12·5	11·4	11·6	10·1	8·9	17·5	23·0	14·1	9·0	**11·0**	5·7
5	9·0	11·0	12·3	9·0	7·5	7·5	20·4	21·2	14·7	9·2	8·9	9·1
6	8·9	7·5	11·3	8·6	6·7	9·9	18·2	19·5	14·2	9·3	8·8	**5·1**
7	12·0	**5·4**	11·6	7·7	7·2	11·6	15·1	18·6	14·3	6·4	7·9	7·2
8	9·1	8·9	7·3	**6·0**	10·7	9·2	15·7	18·3	13·6	**5·0**	9·5	5·9
9	10·1	10·5	**6·1**	6·2	8·9	9·8	18·9	10·5	10·6	5·2	8·2	7·5
10	9·3	9·3	7·6	9·4	8·0	7·2	14·2	16·7	7·2	7·2	9·7	9·3
11	7·0	**13·7**	7·7	**15·6**	7·7	**5·5**	16·5	15·7	7·9	11·4	9·3	6·7
12	5·8	11·7	6·7	12·0	6·5	8·9	25·3	22·9	11·3	7·6	11·0	8·2
13	6·4	11·4	6·5	7·6	7·2	14·5	25·7	26·6	9·2	7·7	6·2	7·8
14	7·0	5·8	8·2	9·0	7·7	12·5	19·0	**26·8**	5·9	8·0	6·7	8·0
15	7·9	5·6	7·7	6·4	11·0	13·5	18·2	22·8	5·8	5·6	6·2	8·2
16	11·2	6·4	7·8	7·3	9·0	13·1	15·4	17·7	**5·5**	8·1	9·0	9·4
17	13·1	8·3	9·2	9·9	6·7	16·9	13·6	11·2	12·0	7·9	7·5	10·3
18	14·0	9·1	9·9	8·1	7·5	**18·5**	8·4	13·3	13·0	10·5	6·2	8·7
19	10·3	9·0	9·1	6·6	13·4	16·9	6·6	12·8	13·2	7·4	7·7	10·2
20	6·9	10·4	10·5	7·7	12·7	14·0	7·4	14·6	8·7	6·4	7·5	11·2
21	9·5	11·3	10·7	10·1	**14·4**	9·6	6·5	14·0	8·2	8·1	8·7	9·8
22	**16·3**	8·8	8·9	7·4	11·4	8·8	5·4	12·1	9·5	7·7	9·6	7·2
23	14·5	7·4	7·0	8·6	10·4	7·2	**4·0**	11·9	15·2	5·8	10·2	5·1
24	14·0	9·2	7·9	7·6	7·3	9·2	5·1	15·3	**15·9**	10·8	8·3	9·1
25	12·1	10·7	7·3	7·6	8·2	16·2	8·0	14·5	15·4	**12·7**	7·9	**12·0**
26	10·1	11·0	9·9	7·8	9·5	9·4	7·8	12·0	11·4	9·8	6·8	9·2
27	5·4	8·7	11·1	8·0	10·2	15·4	6·9	**7·4**	7·0	7·2	**5·6**	9·1
28	6·0	8·3	10·0	8·2	9·2	12·4	18·4	8·3	7·1	5·3	6·7	10·6
29	6·4		10·0	6·6	9·8	12·6	20·1	10·9	9·5	8·2	6·5	5·7
30	5·5		**13·0**	9·6	**6·2**	15·0	23·3	8·8	9·4	9·7	7·7	6·8
31	7·7		8·2		6·6		**26·5**	10·7		7·4		6·7
Monthly Mean .	9·3	9·5	9·0	8·8	8·9	11·4	15·0	**16·6**	10·9	**8·0**	8·3	8·1
Annual Variation	−1·0	−0·8	−1·3	−1·5	−1·4	+1·1	+4·7	+6·3	+0·6	−2·3	−2·0	−2·2

	Miles.
The mean velocity for June to August	14·3
The mean velocity for September to May	9·0
The mean velocity for the year	10·3
The greatest monthly mean (that of August)	16·6
The least monthly mean (that of October)	8·0
Difference =	8·6
The greatest mean daily velocity of wind in the year (that of 14th August) was	26·8
The least do. do. do. (that of 23rd July) was	4·0
Difference =	22·8

Velocity of Wind, 1900.

Dines' Anemograph.

Table VIII*a*.—*Mean Velocity of the Wind, in miles per hour, for each Day of Bombay Civil Time; also the Mean Monthly Velocity, and its Variation from the Mean of the year.*

1900. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1	7·1	6·8	5·8	7·8	6·2	4·8	13·0	**17·6**	9·0	7·2	6·7	4·5
2	7·0	9·2	4·8	9·7	5·2	5·8	14·0	17·2	7·6	5·5	7·0	5·1
3	6·6	8·9	6·5	7·3	7·5	9·3	10·9	15·3	8·7	4·2	6·7	5·5
4	**3·4**	8·8	7·9	8·1	7·7	6·5	11·7	15·1	9·4	6·4	7·3	4·3
5	6·3	7·8	8·7	6·2	5·5	5·2	13·6	13·9	9·7	6·5	6·0	7·0
6	6·2	5·1	7·7	5·9	5·0	6·6	12·5	12·7	9·6	6·5	5·9	3·8
7	8·3	**3·6**	8·1	5·3	5·7	7·7	10·5	12·3	9·4	4·2	5·2	5·8
8	6·3	6·2	5·1	**4·2**	8·2	6·4	10·7	12·0	9·3	**3·2**	6·2	4·1
9	6·9	7·2	**4·2**	4·2	6·9	7·2	12·9	6·6	7·5	3·6	5·4	5·4
10	6·5	6·6	5·1	6·4	5·8	5·2	9·6	10·7	5·0	4·7	6·3	7·0
11	4·5	**9·8**	5·5	**10·8**	6·0	**4·0**	11·5	10·2	5·6	7·4	6·0	5·0
12	3·9	8·6	4·7	8·2	4·7	6·0	16·9	15·0	7·3	5·3	7·3	5·9
13	4·2	8·1	4·4	5·1	5·1	9·7	17·1	17·4	6·4	5·3	4·1	5·5
14	4·6	4·2	6·0	6·1	5·7	8·7	12·7	17·5	4·3	5·4	4·4	5·9
15	5·5	4·0	5·3	4·2	8·2	9·4	12·0	14·9	4·2	4·1	4·1	6·1
16	8·1	4·3	5·2	4·9	6·8	8·7	10·2	11·5	**4·0**	5·5	6·2	6·8
17	9·2	6·1	6·5	7·0	5·0	11·4	8·9	7·1	8·3	5·5	4·7	7·6
18	9·6	6·0	7·0	5·5	5·9	**12·5**	5·5	8·6	9·0	7·3	4·2	6·5
19	6·9	6·3	6·3	4·4	10·0	11·9	5·1	8·2	8·8	5·2	5·1	7·3
20	4·5	7·2	7·5	5·1	9·5	9·5	5·5	9·5	5·9	4·5	5·0	8·2
21	6·4	8·2	7·9	6·8	**10·5**	6·3	4·2	9·0	5·3	5·8	5·9	7·3
22	**11·5**	6·2	6·2	5·1	8·5	5·9	3·4	8·2	6·6	5·5	7·1	5·0
23	10·5	4·9	4·7	5·6	7·5	5·0	**2·6**	8·0	10·5	3·7	**7·5**	**3·7**
24	9·7	6·1	5·4	5·3	4·8	6·7	3·9	10·1	**10·9**	7·5	6·3	6·5
25	8·4	7·6	5·0	5·1	5·8	11·2	6·1	9·5	10·3	**8·8**	5·7	**8·6**
26	7·1	7·8	7·0	5·4	7·0	6·7	5·8	7·9	7·4	6·8	4·9	6·6
27	3·6	6.0	8·0	5·4	7·5	10·7	4·8	**4·8**	4·4	4·9	**4·0**	6.2
28	4·0	5·7	7·1	5·6	7·0	8·2	13·3	5·4	4·8	3·3	5·1	7·5
29	4·3		7·0	4·5	7·1	9·0	13·3	7·1	6·2	5·3	4·5	4·0
30	3·6		**9·2**	6·6	**4·5**	10·5	15·5	5·7	6·4	6·4	5·8	5·1
31	5·2		5·6		4·7		**17·5**	7·3		4·7		4·7
Monthly Mean	6·4	6·7	6·3	6·1	6·6	7·9	10·2	**10·8**	7·4	**5·5**	5·7	5·9
Annual Variation	−0·7	−0·4	−0·8	−1·0	−0·5	+0·8	+3·1	+3·7	+0·3	−1·6	−1·4	−1·2

	Miles.
The mean velocity for June to August	9·6
The mean velocity for September to May	6·3
The mean velocity for the year	7·1
The greatest monthly mean (that of August)	10·8
The least monthly mean (that of October)	5·5
Difference =	5·3
The greatest mean daily velocity of wind in the year (that of 1st August) was	17·6
The least do. do. do. (that of 23rd July) was	2·6
Difference =	15·0

Aggregate and Mean Velocities and Relative Frequency of Different Winds, 1900.

TABLE IX.—*Showing, for the year 1900, the sums of the Velocities, and the Mean Velocities, in miles per hour, of the Winds which blew in each Month, from each of the sixteen Principal Directions: and also the number of hourly Observations which those sums comprise; the latter numbers indicating the Relative Frequency of the same Wind (as to direction) in the several Months, and of different Winds during the same Month.*

1900.	N.			N.N.E.			N.E.			E.N.E.			E.			E.S.E.			S.E.			S.S.E.		
Month.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.
	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.
January ...	1,009	124	8·1	511	72	7·1	259	38	6·8	521	70	7·4	474	65	7·3	16	3	5·3	24	6	4·0	7	2	3·5
February ...	1,012	135	7·5	223	33	6·8	143	24	6·0	121	19	6·4	63	12	5·2	62	12	5·2	0	0	0·0	0	0	0·0
March ...	307	46	6·7	271	47	5·8	103	19	5·4	97	20	4·8	82	14	5·9	15	2	7·5	7	1	7·0	5	1	5·0
April ...	281	46	6·1	201	31	6·5	57	9	6·3	69	10	6·9	26	4	6·5	26	4	6·5	30	5	6·0	53	9	5·9
May ...	81	15	5·4	47	8	5·9	30	6	5·0	0	0	0·0	0	0	0·0	14	2	7·0	0	0	0·0	37	6	6·2
June... ...	10	2	5·0	8	1	8·0	12	1	12·0	0	0	0·0	7	1	7·0	18	3	6·0	64	9	7·1	472	30	15·7
July ...	0	0	0·0	0	0	0·0	0	0	0·0	11	1	11·0	37	7	5·3	180	20	9·0	175	26	6·7	219	26	8·4
August ...	0	0	0·0	0	0	0·0	0	0	0·0	0	0	0·0	0	0	0·0	0	0	0·0	0	0	0·0	5	1	5·0
September ...	105	16	6·6	20	4	5·0	54	8	6·7	29	4	7·2	16	3	5·3	11	1	11·0	58	7	8·3	26	5	5·2
October ...	457	76	6·0	395	54	7·3	733	102	7·2	594	70	8·5	233	33	7·1	110	13	8·5	66	9	7·3	63	17	3·7
November ...	468	74	6·3	194	30	6·5	493	64	7·7	1,299	166	7·8	560	73	7·7	85	12	7·1	0	0	0·0	0	0	0·0
December ...	859	120	7·2	364	60	6·1	382	61	6·3	629	84	7·5	445	60	7·4	236	31	7·6	27	4	6·7	25	4	6·2
Year ...	4,589	654	7·0	2,234	340	6·6	2,266	332	6·8	3,370	444	7·6	1,943	272	7·1	773	103	7·5	451	67	6·7	912	101	9·0

1900.	S.			S.S.W.			S.W.			W.S.W.			W.			W.N.W.			N.W.			N.N.W.			No. of Observations.	
Month.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Calm.	Variable.
	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.		
January ...	0	0	0·0	0	0	0·0	5	1	5·0	43	9	4·8	145	21	6·9	482	73	6·6	1,626	134	12·1	1,831	126	14·5	0	0
February ...	0	0	0·0	15	3	5·0	4	1	4·0	24	4	6·0	133	21	6·3	763	91	8·4	2,120	184	11·5	1,726	133	13·0	0	0
March ...	117	15	7·8	22	5	4·4	31	6	5·2	52	7	7·4	269	33	8·2	1,875	201	9·3	2,568	228	11·3	900	97	9·3	2	0
April ...	100	11	9·1	388	59	6·6	209	28	7·5	440	54	8·1	894	96	9·3	1,385	143	9·7	1,637	150	10·9	569	60	9·5	1	0
May ...	13	2	6·5	58	9	6·4	77	14	5·5	309	39	7·9	894	101	8·9	2,928	302	9·7	1,787	200	8·9	361	36	10·0	4	0
June ...	527	38	13·9	343	35	9·8	683	68	10·0	2,030	197	10·3	2,869	218	13·2	867	82	10·6	256	28	9·1	38	7	5·4	0	0
July ...	120	13	9·2	81	14	5·8	103	19	5·4	2,374	151	15·7	7,314	425	17·2	526	37	14·2	6	1	6·0	10	2	5·0	2	0
August ...	74	8	9·2	67	11	6·1	523	50	10·5	6,081	374	16·3	5,418	280	19·3	93	9	10·3	21	4	5·2	46	6	7·7	0	1
September ...	43	7	6·1	28	5	5·6	29	4	7·2	455	49	9·3	4,155	364	11·4	2,247	185	12·1	442	44	10·0	162	14	11·6	0	0
October ...	0	0	0·0	0	0	0·0	0	0	0·0	8	1	8·0	67	9	7·4	471	51	9·2	1,478	171	8·6	1,308	135	9·7	3	0
November ...	0	0	0·0	0	0	0·0	0	0	0·0	34	5	6·8	88	12	7·3	544	63	8·6	1,180	126	9·4	1,044	94	11·1	1	0
December ...	0	0	0·0	3	1	3·0	9	2	4·5	32	6	5·3	220	31	7·1	635	92	6·9	921	84	11·0	1,225	104	11·8	0	0
Year ...	994	94	10·6	1,005	142	7·1	1,673	193	8·7	11,882	896	13·3	22,466	1,611	13·9	12,816	1,329	9·6	14,042	1,354	10·4	9,220	814	11·3	13	1

Temperature of the Ground, 1900.

TABLE X.—*Showing, for each Month, the Mean Temperature of the Ground, and its Annual Variation, at the respective depths of 1, 9, 20, 60 and 132 inches below the surface.*

DEPTH.	1 INCH.		9 INCHES.		20 INCHES.		60 INCHES.		132 INCHES.	
Month.	Mean Temperature.	Excess over the yearly Mean.	Mean Temperature.	Excess over the yearly Mean.	Mean Temperature.	Excess over the yearly Mean.	Mean Temperature.	Excess over the yearly Mean.	Mean Temperature.	Excess over the yearly Mean.
	°	°	°	°	°	°	°	°	°	°
January ...	**75·9**	−6·3	78·6	−5·3	83·0	−3·8	85·5	−1·6	85·1	−0·6
February ...	76·1	−6·1	**78·5**	−5·4	**81·7**	−5·1	**84·5**	−2·6	84·5	−1·2
March	81·2	−1·0	82·2	−1·7	84·1	−2·7	84·6	−2·5	**84·4**	−1·3
April	84·3	+2·1	85·3	+1·4	87·2	+0·4	86·2	−0·9	84·5	−1·2
May	87·0	+4·8	88·0	+4·1	89·8	+3·0	88·1	+1·0	85·3	−0·4
June	**87·1**	+4·9	**88·6**	+4·7	**91·4**	+4·6	89·6	+2·5	86·2	+0·5
July	84·3	+2·1	86·6	+2·7	89·7	+2·9	**89·7**	+2·6	86·7	+1·0
August... ...	82·1	−0·1	84·7	+0·8	88·0	+1·2	88.6	+1·5	**86·9**	+1·2
September ...	82·7	+0·5	84·6	+0·7	87·5	+0·7	87·7	+0·6	86·5	+0·8
October ...	83·4	+1·2	84·6	+0.7	87·1	+0·3	87·3	+0·2	86·2	+0·5
November ...	82·4	+0·2	83·5	−0·4	86·3	−0·5	87·0	−0·1	86·1	+0·4
December ...	80·5	−1·7	82·2	−1·7	85·6	−1·2	86·6	−0·5	85·8	+0·1
Year ...	82·2		83·9		86·8		87·1		85·7	

Extent of Cloudy Sky, 1900.

TABLE XI.—*Means of Estimations made at 6, 10, 14, 16 and 22 hours daily, the whole Sky being reckoned as 10.*

1900. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December
					MONTH.							
1	...	0·6	...	2·4	...	2·6	**10·0**	**10·0**	7·4	0·6	...	0·4
2	0·4	2·2	2·6	**6·4**	...	**1·6**	8·8	10·0	**9·8**	1·0	0·2	4·8
3	2·2	2·4	1·4	5·4	...	2·4	9·4	10·0	7·0	0·8	...	7·6
4	...	4·0	1·8	3·8	1·0	4·2	6·6	8·6	9·6	3·0	...	2·0
5	1·6	4·0	1·4	3·2	2·0	2·6	8·4	7·2	5·8	1·4	...	2·6
6	2·2	4·2	1·0	0·4	1·6	4·4	9·4	10·0	4·6	...	...	2·6
7	1·2	...	...	2·8	3·6	3·2	7·8	9·8	5·8	8·0	...	**7·8**
8	1·6	...	0·2	1·4	1·0	7·0	9·6	10·0	8·6	2·8	...	5·2
9	**7·0**	...	5·2	2·6	...	7·0	10·0	10·0	6·2	1·8	0·4	...
10	6·0	...	2·2	3·0	1·0	9·6	10·0	10·0	7·4	0·2	0·6	0·2
11	1·6	...	1·2	0·4	0·4	8·2	10·0	10·0	8·0	...	...	1·8
12	0·2	0·2	**6·6**	...	1·6	9·6	10·0	10·0	8·6	...	...	...
13	0·6	...	1·0	...	3·0	9·4	10·0	10·0	6·2	0·2	...	...
14	2·6	...	...	1·4	2·8	8·0	10·0	10·0	2·2	2·0	**4·6**	...
15	1·6	0·8	...	2·8	2·0	7·2	10·0	10·0	1·8	0·4	...	...
16	1·0	0·4	...	3·8	1·2	5·8	9·2	9·4	6·8	...	0·4	...
17	0·2	1·4	...	1·0	2·2	6·0	6·4	9·0	3·6	...	1·2	0·6
18	...	1·6	1·8	1·0	2·6	6·8	8·2	8·2	7·4	3·6	1·6	4·2
19	...	...	2·6	2·8	3·0	5·6	7·6	8·2	8·8	3·0	3·0	4·8
20	...	...	2·0	1·6	2·4	6·8	**3·0**	7·4	8·4	...	3·4	4·8
21	3·4	...	0·8	1·0	2·2	5·2	7·8	8·4	4·8	...	1·8	3·4
22	3·2	0·6	0·2	0·6	4·0	3·8	6·4	7·4	6·8	...	2·8	0·2
23	...	0·4	1·4	1·4	3·8	7·4	9·2	7·8	6·8	5·0	4·0	0·4
24	0·2	**5·8**	0·6	2·6	**6·4**	9·6	8·8	9·2	9·0	5·0	4·4	0·8
25	0·2	1·2	3·6	1·6	5·4	9·6	4·2	10·0	9·0	4·6	3·4	...
26	...	0·8	1·0	0·2	2·2	9·2	5·2	8·0	9·8	4·2	0·8	...
27	...	1·2	0·6	1·2	2·2	9·6	9·0	**5·2**	5·8	**9·2**	...	5·6
28	...	0·2	3·8	1·0	1·6	**10·0**	9·0	8·6	2·6	3·6	...	...
29	...		1·8	0·8	1·8	6·6	9·0	9·2	2·2	1·0	...	...
30	...		1·8	...	1·4	7·8	9·6	7·2	**0·2**	3·8	...	0·6
31	...		...		2·2		10·0	9·8		0·4		2·6
Monthly Mean.	1·2	**1·1**	1·5	1·9	2·1	6·6	8·5	**9·0**	6·4	2·1	1·1	2·0
Annual Variation ...	−2·4	−2·5	−2·1	−1·7	−1·5	+3·0	+4·9	+5·4	+2·8	−1·5	−2·5	−1·6

For the days which have no entry, 0·0 is to be understood.

Mean of the months from January to April, November and December ... ... 1·5

Mean of the months from May to October ... ... 5·8

Mean for the year ... ... 3·6

Rainfall, 1900.

TABLE XII.—*Total Fall of Rain (in inches) as measured by Newman's Gauge, placed 4½ feet above the ground.*

1900. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
						In.	In.	In.	In.			
1	...	...	...	...	...	...	3·12	1·99	0·52	...	...	...
2	...	...	...	...	...	...	0·05	0·50	1·93	...	...	...
3	...	...	...	...	...	...	0·25	0·45	0·10	...	...	...
4	...	...	...	...	...	...	0·18	0·08	...	...	...	...
5	...	...	...	...	...	...	0·01	0·78	0·08	...	...	...
6	...	...	...	...	...	...	0·75	2·15	0·01	...	...	...
7	...	...	...	...	...	...	0·09	0·29	0·05	...	...	...
8	...	...	...	...	...	...	0·15	0·75	0·09	...	...	...
9	...	...	...	...	...	0·30	0·13	0·42	0·34	...	...	...
10	...	...	...	...	...	0·02	0·31	0·89	0·28	...	...	...
11	...	...	...	...	...	...	0·50	0·27	0·21	...	...	...
12	...	...	...	...	...	0·53	1·71	1·27	...	...	...	...
13	...	...	...	...	...	...	4·89	2·21	0·31	...	...	...
14	...	...	...	...	...	...	0·29	1·81	...	...	...	...
15	...	...	...	...	...	...	0·36	0·85	...	...	...	...
16	...	...	...	...	...	0·04	0·12	0·30	0·43	...	...	...
17	...	...	...	...	...	0·02	0·04	...	0·12	...	...	...
18	...	...	...	...	...	...	0·01	...	...	...	...	...
19	...	...	...	...	...	...	0·12	0·02	0·07	...	...	...
20	...	...	...	...	...	...	...	0·37	1·22	...	...	...
21	...	...	...	...	...	...	0·03	0·07	0·53	...	...	...
22	...	...	...	...	...	...	...	0·01	0·05	...	...	...
23	...	...	...	...	...	0·04	0·78	0·07	0·04	...	...	...
24	...	...	...	...	...	1·26	0·51	0·25	0·52	...	...	...
25	...	...	...	...	...	4·16	0·01	0·53	0·12	...	...	...
26	...	...	...	...	...	3·25	...	0·06	0·47	...	...	...
27	...	...	...	...	...	0·73	0·84	0·25	...	...	...	...
28	...	...	...	...	...	6·89	0·80	0·01	...	...	...	...
29	...	...	...	...	...	0·13	1·44	0·17	...	...	...	...
30	...	...	...	...	...	0·89	0·22	0·23	...	...	...	...
31	...	...	...	...	...	...	8·04	0·57	...	...	...	...
Monthly Total.	...	...	...	...	...	18·26	25·75	17·62	7·49	...	...	...
Number of Rainy Days	...	...	...	...	...	13	28	29	21	...	...	...

Total fall of rain in the year ... ... 69·12 inches.
Total number of rainy days in the year 91
The greatest daily fall of rain in the year (that of 31st July) was ... ... 8·04 inches.
No rain fell in the months of January, February, March, April, May, October, November and December, nor on any of the days left blank in the above table.

TABLE XIII.—Five-day Means, 1900.

Number of Five-day Period.	Barometric Pressure.	Temperature of the Air.	Pressure of Vapour.	Additional Capacity of the Air.	*Rainfall.	North or South Component of Wind.	East or West Component of Wind.	Number of Five-day Period.	Barometric Pressure.	Temperature of the Air.	Pressure of Vapour.	Additional Capacity of the Air.	*Rainfall.	North or South Component of Wind.	East or West Component of Wind.
	In.	°	In.	In.	In.	Miles.	Miles.		In.	°	In.	In.	In.	Miles.	Miles.
1	29·924	75·2	0·604	0·278	...	6·4 N.	1·0 W.	38	29·668	83·1	0·947	0·185	1·13	0·2 N.	17·6 W.
2	·917	74·0	·554	·292	...	7·4 N.	2·4 W.	39	·588	81·8	·946	·143	7·70	2·0 S.	19·5 W.
3	·952	75·8	·663	·234	...	2·7 N.	1·2 W.	40	·680	82·6	·945	·170	0·65	1·4 S.	11·1 W.
4	**·994**	71·9	·505	·285	...	8·5 N.	0·4 E.	41	·719	83·0	·940	·190	1·32	1·3 S.	3·1 W.
5	·970	**71·0**	**·453**	·311	...	**11·0 N.**	3·0 W.	42	·635	82·1	·941	·159	3·09	3·3 S.	5·7 W.
6	·912	71·7	·575	·206	...	3·5 N.	1·8 W.	43	·624	79·6	·896	·117	11·20	4·3 S.	**24·2 W.**
7	·936	72·8	·525	·286	...	9·4 N.	2·3 W.	44	·597	80·7	·932	·117	4·05	4·3 S.	19·4 W.
8	·927	74·4	·589	·267	...	6·5 N.	2·9 W.	45	·624	79·6	·918	**·091**	5·06	3·1 S.	17·4 W.
9	·924	73·3	·587	·237	...	8·0 N.	5·1 W.	46	·723	80·3	·912	·123	2·96	3·5 S.	17·6 W.
10	·912	73·7	·640	·195	...	3·3 N.	3·8 W.	47	·744	81·3	·899	·168	0·54	3·8 S.	11·9 W.
11	·921	75·1	·614	·261	...	7·2 N.	4·2 W.	48	·716	81·1	·893	·168	1·10	3·3 S.	10·3 W.
12	·925	75·7	·684	·206	...	6·3 N.	5·1 W.	49	·778	79·6	·871	·139	3·42	2·1 S.	10·1 W.
13	·948	75·7	·682	·207	...	7·6 N.	5·2 W.	50	·829	81·2	·891	·174	0·24	0·9 N.	14·0 W.
14	·919	78·7	·742	·243	...	3·2 N.	3·8 W.	51	·762	80·7	·888	·161	0·92	1·3 N.	9·3 W.
15	·863	80·8	·739	·320	...	3·1 N.	3·6 W.	52	·785	81·4	·876	·197	0·86	0·5 N.	7·1 W.
16	·851	78·6	·746	·236	...	6·6 N.	5·5 W.	53	·821	80·2	·870	·162	1·87	2·7 N.	8·4 W.
17	·901	78·6	·739	·240	...	3·7 N.	6·4 W.	54	·786	80·6	·925	·120	1·15	2·3 N.	12·2 W.
18	·879	80·3	·806	·232	...	7·0 N.	6·6 W.	55	·875	81·2	·888	·178	...	5·8 N.	3·2 W.
19	·843	79·3	·780	·225	...	7·8 N.	5·7 W.	56	·812	80·4	·821	·221	...	5·9 N.	2·4 W.
20	·845	80·0	·804	·224	...	2·5 N.	5·5 W.	57	·833	80·3	·834	·205	...	4·9 N.	1·0 W.
21	·830	82·0	·848	·249	...	4·7 N.	5·5 W.	58	·861	80·9	·789	·270	...	4·9 N.	0·6 W.
22	·804	82·8	·887	·238	...	0·2 S.	5·5 W.	59	·921	80·0	·767	·263	...	5·1 N.	0·5 W.
23	·797	83·5	·899	·252	...	1·5 N.	5·6 W.	60	·878	82·1	·755	·346	...	5·4 N.	**2·3 E.**
24	·815	83·7	·855	·302	...	0·5 S.	5·2 W.	61	·945	81·7	·814	·276	...	3·7 N.	0·1 E.
25	·776	84·2	·879	·299	...	2·2 N.	6·1 W.	62	·906	81·0	·686	**·378**	...	6·0 N.	0·9 E.
26	·856	83·7	·836	·321	...	3·5 N.	6·1 W.	63	·856	78·8	·701	·292	...	4·9 N.	1·7 E.
27	·877	83·9	·856	·311	...	2·4 N.	6·7 W.	64	·889	79·0	·753	·243	...	3·8 N.	0·2 E.
28	·834	84·2	·882	·295	...	5·1 N.	7·7 W.	65	·870	80·3	·753	·287	...	4·2 N.	0·4 E.
29	·813	84·7	·879	·316	...	4·3 N.	8·6 W.	66	·879	80·7	·702	·353	...	5·9 N.	0·5 E.
30	·781	84·8	·913	·285	...	3·7 N.	7·7 W.	67	·867	79·6	·747	·268	...	3·8 N.	0·9 W.
31	·817	85·5	·902	·323	...	3·6 N.	7·5 W.	68	·876	80·0	·722	·305	...	3·6 N.	0·2 E.
32	·718	86·3	·945	·313	0·30	3·3 S.	7·8 W.	69	·962	78·6	·690	·292	...	3·7 N.	0·8 E.
33	**·587**	86·3	·998	·259	0·55	3·7 S.	7·2 W.	70	·979	79·3	·666	·341	...	4·4 N.	1·4 E.
34	·661	**87·2**	**1·006**	·286	0·06	2·2 S.	14·9 W.	71	·959	77·6	·627	·327		7·6 N.	0·5 W.
35	·691	85·9	0·946	·305	1·30	1·3 S.	9·0 W.	72	·956	76·6	·659	·262	...	6·1 N.	2·7 W.
36	·678	79·6	·896	·116	**15·16**	**7·4 S.**	4·7 W.	73	·906	75·7	·674	·221	...	3·6 N.	1·2 W.
37	·658	82·7	·957	·163	4·49	4·9 S.	14·8 W.								

* Five-day sums, *not means*.

Meteorological Elements, 1896 to 1900.

TABLE *XIV.—Annual and Lustral means.*

Year.	Barometric Pressure.	Temperature of Air.	Pressure of Vapour.	Additional Capacity.	*Rain fall.	Wind.	
						North Component.	East Component.
	In.	°	In.	In.	In.	Miles.	Miles.
1896	29·820	80·7	0·802	0·253	87·65	1·9 N	5·9 W
1897	·810	79·5	·781	·238	81·53	2·1 N	5·0 W
1898	·798	80·3	·797	·248	74·09	2·0 N	5·3 W
1899	·833	80·0	·775	·259	35·90	1·8 N	5·1 W
1900	·827	80·0	·793	·240	69·12	2·7 N	5·8 W
Mean	29·818	80·1	0·790	0·248	69·66	2·1 N	5·4 W

* Sums, *not* means.

TABLE I.—Barometric Pressure, 1901.

Height of Barometer above mean Sea-level = 37 feet.

1901.	MONTH.											
Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
1	29·876	29·898	29·877	**29·852**	**29·865**	29·734	29·642	29·680	29·871	29·781	29·883	**29·887**
2	·878	·907	·905	·828	·849	·738	**·563**	·650	·825	·749	·875	·920
3	·900	·874	**·939**	·818	·856	·739	·580	·664	·817	·767	·856	·954
4	·948	·878	·920	·833	·824	·727	·638	·642	·826	·764	·886	·988
5	·939	·926	·925	·823	·760	·690	·630	·624	·841	·771	·880	·969
6	·878	·983	·922	·844	·768	·633	·592	·630	·848	·781	·872	·981
7	**·869**	30·010	·913	·794	·805	·583	·567	**·622**	·868	·800	·890	30·003
8	·943	29·953	·891	·832	·847	·540	·607	·624	·873	·835	·898	**·016**
9	·985	·942	·877	·821	·808	**·512**	·634	·641	.864	·840	·874	29·992
10	·960	·947	·881	·804	·750	·580	·642	·666	·876	·853	·837	·983
11	·952	·932	·895	·783	·749	·602	·691	·702	·856	·860	·848	·985
12	·952	·922	·891	·764	·772	·595	·700	·713	·865	·834	·852	·954
13	·974	·930	·877	·765	·789	·661	·686	·699	·884	·822	·833	·931
14	·988	·929	·873	·721	·809	·733	·697	·665	·872	·839	·811	·934
15	30·005	·931	·855	·736	·807	·732	·698	·659	·867	·800	·814	·940
16	29·973	·949	·848	·760	·819	·679	·694	·669	·824	**·736**	**·802**	·940
17	·980	·928	·835	·752	·821	·653	·658	·689	·805	·807	·809	·969
18	30·004	·999	·858	·752	·787	·680	·633	·663	·831	·868	·848	·974
19	29·979	**30·061**	·895	·742	·776	·731	·656	·651	·820	·874	·887	·940
20	·972	29·990	·920	·725	·790	**·764**	·699	·692	·789	·847	·890	·923
21	30·002	·986	·935	·765	·752	·727	**·738**	·734	·782	·871	·870	·951
22	·003	·965	·906	·779	·753	·706	·711	·768	·781	·897	·867	30·006
23	**·035**	·956	·933	·778	·750	·699	·685	·740	**·770**	·903	·852	29·999
24	·006	·935	·918	·751	·727	·736	·677	·724	·783	·858	·864	·935
25	29·970	·934	·877	**·703**	**·701**	·740	·621	·738	.821	·844	·904	·908
26	·985	·933	·874	·707	·719	·694	·618	·782	·872	·884	·934	·920
27	·982	·886	·875	·746	·749	·679	·659	·815	**·887**	**·910**	**·935**	·953
28	·983	**·871**	·868	·766	·782	·697	·685	·799	·885	·859	·914	·929
29	·940		**·834**	·743	·760	·718	·673	·799	·865	·823	·893	·901
30	·874		·871	·810	·772	·696	·713	·852	·835	·849	·873	·920
31	·875		·875		·765		·737	**·855**		·879		·924
Monthly Mean.	**29·955**	29·941	29·889	29·776	29·783	29·680	**29·659**	29·705	29·840	29·832	29·868	29·953
Annual Variation ...	+·132	+·118	+·066	−·047	−·040	−·143	−·164	−·118	+·017	+·009	+·045	+·130

	In.
Annual mean	29·823
The greatest mean daily barometric pressure in the year (that of 19th February) was	30·061
The least do do do (that of 9th June) was	29·512
Difference =	0·549

TABLE II.—Temperature of the Air, 1901.

1901. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November	December.
	°	°	°	°	°	°	°	°	°	°	°	°
1	74·5	78·1	74·3	**79·9**	85·5	86·4	79·0	80·7	81·3	82·2	81·9	**80·1**
2	72·2	**79·2**	**73·8**	80·9	85·4	87·0	80·3	80·4	80·9	80·9	82·9	79·6
3	71·8	78·4	74·4	82·2	85·6	87·0	80·4	79·0	80·3	81·6	83·2	79·4
4	71·7	75·5	75·4	82·4	85·9	87·2	79·9	78·2	80·2	80·6	83·4	78·6
5	70·5	72·6	75·5	82·6	85·3	**87·4**	80·4	**78·1**	81·3	80·8	**83·6**	78·1
6	72·7	71·2	74·9	82·3	85·4	87·1	78·5	80·5	81·4	81·2	82·9	78·5
7	74·8	69·8	74·5	82·6	84·4	84·1	79·8	79·5	81·7	80·9	83·1	77·8
8	75·4	68·9	74·8	82·4	84·6	84·8	82·4	79·9	81·0	80·2	81·1	77·1
9	72·2	70·2	75·6	82·9	**84·1**	86·5	**83·2**	78·1	81·2	79·6	81·0	77·3
10	71·7	71·2	77·2	82·6	84·4	83·8	81·6	80·4	81·4	80·3	79·4	78·5
11	74·8	70·6	79·9	82·3	84·3	81·7	81·8	81·1	79·2	80·8	78·2	78·6
12	**76·7**	69·3	82·4	82·9	84·9	79·4	82·1	81·0	**79·0**	79·8	78·3	77·2
13	72·1	70·0	83·1	83·1	**86·8**	**78·2**	82·1	80·9	80·6	78·9	79·1	75·7
14	72·0	69·9	**83·2**	84·2	86·8	82·5	82·7	79·9	80·7	79·0	79·8	**74·1**
15	70·7	69·8	81·4	84·4	86·3	84·4	83·0	80·8	80·9	79·4	80·9	75·1
16	70·9	71·0	81·2	83·6	85·6	84·1	82·6	81·1	81·4	78·9	82·0	78·2
17	71·2	71·0	80·3	82·9	85·4	84·8	81·6	80·6	81·7	**77·8**	81·6	78·0
18	**70·0**	71·2	80·4	83·6	85·5	82·2	79·1	80·0	82·4	79·9	81·8	77·3
19	70·3	71·2	80·5	82·8	85·2	79·6	81·9	79·1	81·7	79·7	81·5	77·0
20	71·4	71·2	81·1	82·4	85·5	80·1	81·7	79·7	81·8	80·6	79·9	77·9
21	71·9	69·3	79·7	82·7	85·8	80·1	82·0	80·2	82·0	81·4	79·5	76·5
22	72·6	**66·7**	81·4	82·3	86·3	82·9	81·9	79·8	82·2	81·6	78·9	77·0
23	76·5	70·4	81·2	82·7	86·5	82·7	81·3	80·4	**82·5**	81·5	79·1	76·8
24	75·2	75·0	81·6	82·9	86·6	81·5	79·7	80·6	82·4	**83·0**	79·5	76·5
25	74·1	78·2	82·1	84·1	86·6	82·6	79·5	80·6	81·7	82·5	78·8	76·2
26	74·6	78·0	81·3	85·0	86·0	84·4	**77·7**	80·9	80·9	82·1	76·2	75·9
27	73·6	76·4	80·5	85·9	85·8	84·5	81·5	**81·4**	80·2	81·7	**75·5**	74·1
28	74·8	74·5	80·2	85·3	86·4	80·4	81·2	79·9	80·0	81·0	75·9	74·8
29	74·7		79·8	86·1	86·5	78·2	78·7	80·4	81·5	81·3	77·7	78·0
30	74·6		79·4	**86·5**	86·7	78·4	81·6	80·2	81·7	82·4	79·4	78·6
31	76·3		79·4		86·1		81·7	80·7		82·4		78·9
Monthly Mean.	73·1	**72·5**	79·0	83·2	**85·7**	83·1	81·0	80·1	81·2	80·8	80·2	77·3
Annual Variation	−6·7	−7·3	−6·8	+3·4	+5·9	+3·3	+1·2	+0·3	+1·4	+1·0	+0·4	−2·5

Annual mean ... ...

TABLE III.—Pressure of Vapour, 1901.

1901. Date.	MONTH.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	0·591	0·624	0·682	0·825	0·888	0·901	0·901	0·907	0·875	0·929	0·790	0·687
2	·496	·740	·678	·869	·887	·925	·909	·905	·859	·905	·845	·736
3	·526	**·791**	·731	·909	·894	·939	·920	·881	·847	·939	·855	·747
4	·509	·668	·737	·896	·901	·933	·919	·900	·863	·885	·865	**·768**
5	·443	·577	·697	·829	·877	·947	·918	·905	·871	·876	·849	·692
6	·518	·518	·682	·878	·865	·948	·895	**·914**	·857	·857	·747	·645
7	·631	·468	·699	·815	**·830**	·938	·918	·895	·856	·832	·633	·614
8	·566	·369	·721	·839	·831	·974	·953	·902	·839	·829	·646	**·555**
9	·507	·440	·702	**·768**	·840	**1·008**	**·975**	·881	**·808**	·847	·654	·575
10	·515	·440	·733	·803	·875	0·962	·932	·903	·814	·897	·710	·556
11	·651	·356	·749	·848	·896	·947	·932	·908	·818	·934	·734	·567
12	·735	·352	·717	·895	·903	·891	·931	·897	·835	·879	·717	·633
13	**·693**	·398	·664	·879	·923	·894	·917	·904	·857	·838	·679	·578
14	·673	·420	**·577**	·874	**·980**	·980	·929	·906	·857	·861	·734	·620
15	·549	·455	·638	·886	·927	·982	·930	·911	·864	·896	·848	·623
16	·553	·540	·681	·825	·896	·974	·932	·913	·884	·898	**·875**	·687
17	·537	·558	·803	·893	·877	·966	·912	·909	·946	·824	·824	·661
18	**·424**	·481	**·877**	·900	·888	·953	·903	·893	**·960**	·878	·722	·611
19	·479	·434	·876	·835	·862	·929	·932	·910	·905	·869	·701	·627
20	·498	·473	·834	·817	·879	·910	·930	·907	·895	·882	·736	·637
21	·577	·414	·788	·835	·885	·916	·919	·879	·907	·902	·743	·624
22	·604	**·331**	·782	·833	·882	·936	918	·875	·938	·912	·776	·630
23	·678	·423	·782	·854	·921	·938	·923	·874	·944	·914	·671	·618
24	·682	·486	·747	·840	·910	·937	·916	·879	·908	**·960**	·605	·620
25	·583	·593	·671	·876	·911	·959	·902	·885	·816	·953	·552	·665
26	·643	·624	·739	·925	·903	·947	**·885**	·879	·817	·942	·487	·682
27	·575	·628	·802	**·980**	·926	·940	·923	·877	·820	·829	**·480**	·590
28	·629	·642	·792	·892	·968	·889	·922	**·867**	·855	·823	·539	·560
29	·659		·804	·834	·968	**·867**	·919	·872	·922	·857	·624	·654
30	·596		·816	·881	·938	·886	·915	·870	·956	·792	·682	·696
31	·611		·782		·896		·908	·872		**·781**		·692
Monthly Mean.	0·578	**0·509**	0·741	0·861	0·898	**0·937**	0·920	0·893	0·873	0·878	0·711	0·640
Annual Variation.	−·209	−·278	−·046	+·074	+·111	+·150	+·133	+·106	+·086	+·091	−·076	−·147

	in.
Annual mean	0·787
The greatest mean daily pressure of vapour in the year (that of 9th June) was ...	1·008
The least do. do. do. (that of 22nd February) was ...	0·331
Difference =	0·677

TABLE IV.—Additional Capacity of the Air, 1901.

1901. Date.	MONTH. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1	0·264	0·347	0·169	0·197	0·340	**0·361**	0·089	0·141	0·195	0·174	0·308	0·345
2	·298	·262	·162	**·190**	·336	·360	·126	·132	·195	·152	·289	·279
3	·257	**·183**	**·124**	·193	·337	·348	·118	·111	·189	·143	·284	·263
4	·270	·214	·145	·215	·342	·361	·111	·066	·167	·160	·280	**·213**
5	·310	·223	·187	·288	·339	·355	·120	**·059**	·200	·177	·308	·278
6	·297	·247	·186	·229	·358	·340	·078	·127	·215	·208	·384	·337
7	·236	·262	·156	·305	·355	·234	·098	·111	·227	·224	**·504**	·344
8	**·315**	·345	·144	·269	·359	·230	·155	·117	·221	·204	·429	·382
9	·285	·302	·189	·363	·334	·271	·160	·082	·257	·165	·407	·371
10	·269	·328	·206	·314	·312	·195	·148	·135	·259	·138	·392	**·431**
11	·223	**·397**	·279	·261	**·286**	·137	·156	·153	·183	·120	·235	·418
12	·190	·367	·402	·233	·300	·114	·168	·161	·161	·142	·261	·307
13	**·096**	·341	·474	·258	·357	**·074**	·180	·152	·190	·150	·322	·317
14	·112	·316	**·567**	·305	·298	·131	·189	·116	·190	·133	·289	·229
15	·205	·280	·441	·297	·330	·200	**·198**	·139	·193	·110	**·211**	·256
16	·209	·224	·391	·330	·334	·193	·181	·148	·189	**·090**	·221	·284
17	·231	·205	·235	·237	·345	·231	·168	·134	·137	·131	·257	·303
18	·314	·287	·162	·256	·337	148	·092	·130	·152	·144	·367	·333
19	·267	·334	·166	·289	·351	·083	·159	·085	·179	·148	·380	·308
20	·276	·294	·232	·293	·348	·117	·154	·108	·190	·166	·292	·324
21	·209	·303	·228	·285	·354	·113	·172	·152	·186	·173	·268	·294
22	·203	·330	·293	·272	**·377**	·190	·173	·142	·164	·170	·212	·304
23	·242	·331	·288	·268	·342	·179	·146	·164	·167	·166	·328	·307
24	·194	·396	·334	·286	·359	·139	·097	·166	·200	·170	·408	·298
25	·264	·382	·429	·298	·361	·158	·107	·161	**·270**	·158	·439	·244
26	·217	·344	·334	·285	·343	·233	**·063**	·177	·240	·156	·423	·213
27	·259	·285	·242	·260	·310	·247	·152	**·196**	·213	·260	·410	·253
28	·240	·214	·242	·329	·291	·151	·143	·155	·172	·238	·363	·308
29	·205		·217	**·415**	·296	·099	·063	·164	·155	·213	·334	·313
30	·264		·191	·387	·337	·086	·165	·160	**·130**	·319	·330	·286
31	·301		·225		·355		·172	·174		**·334**		·304
Monthly Mean.	0·243	0·298	0·259	0·280	**0·336**	0·203	0·139	**0·136**	0·193	0·175	0·328	0·305
Annual Variation ...	+·002	+·057	+·018	+·039	+·095	−·038	−·102	−·105	−·048	−·066	+·087	+·064

	in.
Annual mean	0·241
The greatest mean daily additional capacity of the air in the year (that of 14th March) was	0·567
The least do. do. do. (that of 5th August) was... ...	0·059
Difference =	0·508

Maxima and Minima of different Meteorological Elements, 1901.

TABLE V.—*In which are collected the individual observations in each month of the year, which showed the greatest and the least values of the following elements, viz., Height of Barometer, corrected for Temperature; Temperature of Air; Pressure of Vapour; and Additional Capacity of Air.*

1901.	HEIGHT OF BAROMETER.			TEMPERATURE OF AIR.			PRESSURE OF VAPOUR.			ADDITIONAL CAPACITY.		
Month.	Greatest.	Least.	Range.	Greatest.	Least.	Range.	Greatest.	Least.	Range.	Greatest.	Least.	Range.
	in.	in.	in.	°	°	°	in.	in.	in.	in.	in.	in.
January ...	30·118	29·808	0·310	85·8	64·5	21·3	0·805	0·298	0·507	0·631	0·043	0·588
February .	·144	·809	·335	88·7	59·4	29·3	·898	·196	·702	·784	·066	·718
March ...	·911	·770	·241	93·9	69·3	24·6	·933	·356	·577	1·085	·047	1·038
April ...	29·934	·621	·313	91·4	76·5	14·9	1·038	·663	·375	0·620	·066	0·554
May ...	·911	·661	·259	91·2	80·0	11·2	·018	·620	·398	·821	·169	·652
June ...	·815	·422	·393	96·3	75·5	20·8	·100	·788	·312	·696	·033	·663
July ...	·772	·492	·280	86·0	74·6	11·4	·010	·802	·208	·277	·021	·256
August ...	·896	·582	·314	83·9	75·8	8·1	0·986	·821	·165	·288	·029	·259
September.	·952	·705	·247	86·9	74·4	12·5	1·039	·760	·279	·408	·042	·366
October ...	·974	·675	·299	90·9	74·8	16·1	·027	·601	·426	·814	·030	·784
November.	30·016	·740	·276	92·2	70·3	21·9	0·983	·379	·604	1·015	·087	·928
December.	·078	·836	·242	88·5	69·1	19·4	·888	·366	·522	0·978	·071	·907
Year ...	30·144	29·422	·722	96·3	59·4	36·9	1·100	0·196	0·904	1·085	0·021	1·064

Rainfall, 1901.

TABLE VI.—*Total fall of rain (in inches) as measured by F. Chambers's Self-registering Gauge, the funnel of which is 28 feet above the ground.*

1901. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	MONTH.											
	in.			in.		in.	in.	in.	in.	in.		
1	...	...	...	...	...	...	0·18	0·41	...	...	...	...
2	...	...	...	...	...	...	0·07	0·43	0·05	...	...	...
3	...	...	...	...	...	...	0·31	0·60	0·12	...	...	...
4	...	...	...	...	...	...	1·03	2·39	0·29	...	...	...
5	...	...	...	...	...	...	1·86	1·56	0·03	...	...	...
6	...	...	...	...	...	...	3·46	0·23	...	...	...	...
7	...	...	...	...	...	0·56	1·87	0·93	...	...	...	...
8	...	...	...	...	...	0·50	0·03	0·65	0·10	...	...	...
9	...	...	...	...	...	0·67	0·12	2·82	...	...	...	...
10	...	...	...	...	...	0·06	0·40	0·06	0·01	...	...	...
11	...	...	...	...	...	0·38	0·17	0·01	0·82	...	...	...
12	...	...	...	...	...	1·11	0·72	0·01	0·39	...	...	...
13	...	0·71	...	...	...	6·30	0·30	0·09	...	...	...	...
14	...	0·02	...	...	...	0·64	0·18	0·55	...	...	...	...
15	...	...	...	...	...	0·23	...	0·07	...	...	...	...
16	...	...	...	...	...	0·03	0·07	0·01	...	0·04	...	...
17	...	...	...	...	...	0·01	1·47	0·28	...	0·27	...	...
18	...	...	...	...	...	0·93	3·24	0·06	...	...	...	...
19	...	...	...	...	...	5·14	0·01	0·56	...	...	...	...
20	...	...	...	...	...	1·13	0·29	0·23	...	...	...	...
21	...	...	...	...	...	1·26	0·03	0·02	...	...	...	...
22	...	...	...	...	...	0·27	0·19	0·23	...	0·04	...	...
23	...	...	...	...	...	0·14	0·98	0·09	...	...	...	...
24	...	...	...	...	...	0·19	2·90	0·15	...	...	...	...
25	...	...	...	...	...	0·14	2·87	0·02	...	...	...	...
26	...	...	...	...	...	0·11	4·66	...	...	...	...	...
27	...	...	...	...	...	0·05	0·01	...	...	...	...	...
28	...	...	...	0·03	...	1·14	0·24	0·78	...	...	...	...
29	...	...	...	...	...	2·83	3·46	0·08	...	...	...	...
30	...	...	...	...	...	0·80	0·24	0·33	...	...	...	...
31	...	...	...		...		0·10	0·05		...		...
Monthly Total.	0·73	...	...	0·03	...	24·62	31·46	13·70	1·81	0·35	...	...
Number of rainy days. ...	2	...	...	1	...	24	30	29	8	3	...	...

Total fall of rain in the year ... ... 72·70 inches.
Total number of rainy days in the year 97
The greatest daily fall of rain in the year (that of 13th June) was ... ... 6·30 inches.
No rain fell in the months of February, March, May, November and December, nor on any of the days left blank in the above table.

Mean Daily Velocities of the North and East Components of the Wind, 1901.

TABLE VII.—*Showing the Mean Velocities of the North or South and East or West Components of the Winds which blew on each day of the year 1901.*

In Miles per Hour.

1901.	MONTH.																							
Date.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.	N. or S.	E. or W.
1	9·6 N	0·3 W	8·0 N	3·0 W	0·1 N	4·7 W	6·8 N	5·8 W	0·2 N	2·6 W	1·0 S	6·8 W	6·0 S	3·1 W	0·0	17·0 W	4·7 N	11·4 W	6·2 N	2·4 W	5·1 N	2·1 W	4·0 N	1·2 E
2	6·7 N	2·1 W	3·0 N	1·2 E	1·4 N	1·5 W	1·1 N	4·3 W	1·1 N	7·1 W	2·3 S	7·5 W	7·0 S	3·8 E	0·6 S	19·6 W	0·3 N	13·8 W	3·0 S	1·9 W	3·0 N	0·9 W	1·7 N	0·2 E
3	2·4 N	3·9 E	0·7 N	0·6 E	2·4 N	4·6 W	6·7 S	2·8 W	2·2 S	7·0 W	3·3 S	7·6 W	10·5 S	0·7 W	0·3 N	17·8 W	0·2 N	15·5 W	3·1 S	1·9 W	3·8 N	0·3 E	1·2 N	0·7 E
4	10·4 N	0·9 E	7·1 N	6·3 W	1·8 N	4·4 W	1·9 S	2·5 W	4·7 S	7·4 W	4·9 S	7·1 W	9·0 S	5·7 W	1·1 N	17·8 W	0·4 S	12·6 W	3·0 N	4·4 W	2·6 N	0·4 E	4·2 N	1·1 W
5	7·1 N	0·6 W	8·2 N	3·3 W	4·5 N	3·1 W	5·4 N	5·0 W	0·5 S	10·5 W	3·8 S	6·8 W	4·6 S	12·2 W	0·6 S	18·0 W	0·6 N	10·8 W	6·4 N	6·6 W	3·8 N	1·0 E	2·4 N	0·3 W
6	7·3 N	1·5 E	8·8 N	1·4 W	4·2 N	3·0 W	2·3 N	4·9 W	1·9 S	9·7 W	0·6 N	6·3 W	4·4 S	19·4 W	1·8 S	17·7 W	0·6 N	8·2 W	6·5 N	9·1 W	4·6 N	2·9 E	2·5 N	0·4 E
7	3·7 S	0·3 E	9·6 N	2·0 W	5·3 N	3·6 W	4·6 N	3·7 W	1·5 N	7·5 W	5·4 N	4·0 W	8·1 S	18·4 W	5·7 S	17·3 W	0·8 S	5·8 W	5·1 N	7·4 W	4·7 N	7·1 E	4·6 N	2·9 E
8	3·2 N	7·2 W	9·3 N	4·7 W	6·2 N	5·1 W	2·9 N	4·6 W	1·8 N	6·9 W	8·7 N	4·2 W	1·7 S	20·9 W	4·5 S	22·1 W	0·7 S	5·4 W	8·8 N	6·9 W	6·0 N	2·2 E	5·2 N	4·0 E
9	9·9 N	1·5 W	3·7 N	1·0 W	5·0 N	4·6 W	4·2 N	4·3 W	5·7 N	6·9 W	2·6 N	1·4 E	0·0	20·3 W	1·7 S	18·9 W	1·1 S	8·6 W	8·5 N	5·7 W	4·7 N	1·7 E	8·2 N	1·5 E
10	10·2 N	1·6 W	6·2 N	2·6 W	2·1 N	3·3 W	3·5 N	5·3 W	6·1 N	6·0 W	24·0 S	10·8 E	0·7 S	14·6 W	1·1 N	17·6 W	0·9 S	8·9 W	6·9 N	2·7 W	3·5 N	1·9 E	7·1 N	7·2 E
11	3·7 N	1·1 E	11·1 N	1·7 W	3·1 N	1·3 W	3·8 N	4·8 W	4·6 N	6·9 W	23·8 S	2·8 E	2·2 S	19·5 W	1·5 S	16·4 W	1·6 N	4·3 W	2·4 N	4·8 W	2·9 N	1·2 E	5·4 N	0·8 E
12	0·3 S	1·2 W	9·8 N	2·4 W	5·7 N	1·2 W	5·0 N	6·2 W	8·5 N	10·2 W	10·4 S	7·8 W	3·7 S	16·5 W	3·4 S	12·8 W	0·3 S	1·9 W	2·8 N	4·5 W	3·8 N	1·8 E	6·9 N	1·0 W
13	3·0 N	3·2 E	9·2 N	0·5 E	7·7 N	1·4 W	5·2 N	6·1 W	7·0 N	2·9 W	7·8 S	7·7 W	5·7 S	15·6 W	3·6 S	14·2 W	6·1 N	2·8 W	5·8 N	5·2 W	6·7 N	2·2 E	5·9 N	1·9 W
14	6·5 N	1·9 E	9·7 N	2·8 W	7·7 N	1·0 W	8·4 N	7·8 W	1·6 N	6·4 W	3·5 S	14·5 W	3·2 S	17·5 W	3·6 S	18·6 W	7·3 N	3·9 W	5·4 N	5·6 W	3·2 N	2·5 E	5·7 N	0·9 W
15	8·7 N	0·2 W	6·9 N	3·2 W	7·5 N	5·2 W	6·4 N	7·4 W	1·0 S	6·2 W	0·5 N	14·1 W	1·5 S	13·5 W	6·3 S	16·0 W	9·2 N	7·7 W	3·0 N	5·4 W	0·1 N	0·2 W	5·5 N	1·5 W
16	3·5 N	0·1 E	0·9 N	1·1 W	7·5 N	3·4 W	4·8 N	6·0 W	3·8 N	7·7 W	0·2 N	15·8 W	0·8 S	15·7 W	5·0 S	13·3 W	9·5 N	7·0 W	3·3 S	2·4 W	3·7 N	1·7 W	0·6 N	2·2 E
17	8·7 N	1·4 W	3·7 N	1·7 W	2·2 S	3·6 W	4·6 N	5·6 W	4·4 N	8·4 W	2·1 N	16·9 W	0·9 N	16·0 W	2·6 S	14·0 W	7·8 N	5·7 W	14·1 S	1·5 E	3·8 N	2·1 W	2·7 N	1·9 E
18	11·3 N	1·9 W	6·5 N	4·8 W	4·2 S	2·4 W	1·6 S	5·3 W	2·3 N	8·4 W	3·1 N	10·3 W	1·0 N	19·4 W	2·8 S	8·7 W	5·6 N	6·3 W	9·6 S	1·8 E	5·7 N	0·5 E	5·0 N	1·4 E
19	8·9 N	1·6 W	12·8 N	1·4 W	1·0 S	4·3 W	2·3 S	5·3 W	0·4 S	7·3 W	0·4 S	9·4 W	6·9 S	13·8 W	4·2 S	7·9 W	5·2 N	6·0 W	2·8 S	0·5 W	4·3 N	1·4 E	4·5 N	2·6 E
20	8·6 N	3·9 W	11·6 N	4·3 W	3·7 N	3·2 W	0·6 N	5·1 W	1·1 S	7·8 W	3·4 S	8·1 W	6·8 S	15·9 W	1·3 S	13·1 W	5·6 N	6·3 W	4·4 S	0·1 W	3·6 N	0·2 W	2·3 N	5·1 E
21	8·2 N	2·8 W	19·9 N	5·7 W	4·1 N	1·7 W	1·1 N	6·1 W	2·7 S	6·5 W	5·9 S	6·5 W	5·9 S	14·9 W	1·5 S	14·5 W	5·3 N	6·5 W	0·0	2·9 W	3·2 N	1·4 W	3·2 N	3·2 E
22	7·8 N	1·5 W	14·1 N	3·1 W	4·2 N	3·4 W	4·2 N	6·4 W	3·9 S	6·1 W	3·8 S	12·9 W	0·5 S	17·4 W	2·7 S	15·7 W	3·3 N	7·0 W	5·8 N	3·0 W	3·5 N	2·7 W	3·8 N	2·5 E
23	3·3 N	2·6 E	13·5 N	3·3 W	6·4 N	6·2 W	4·8 N	5·8 W	3·3 S	8·0 W	4·7 S	7·0 W	1·8 N	16·6 W	5·6 S	19·5 W	0·9 N	5·6 W	0·3 N	0·8 W	1·9 N	0·7 E	3·6 N	0·1 E
24	6·2 N	0·6 W	8·9 N	0·5 E	15·4 N	8·0 W	5·1 N	8·5 W	2·8 S	9·4 W	7·9 S	0·3 E	0·7 N	16·4 W	2·1 S	20·2 W	0·8 S	7·5 W	1·1 N	1·4 W	4·1 N	1·1 E	1·1 N	1·1 E
25	6·8 N	3·2 W	7·6 N	2·6 E	13·3 N	5·6 W	8·6 N	6·5 W	2·6 S	6·9 W	8·1 S	1·0 W	3·8 N	15·9 W	0·6 S	17·2 W	1·0 S	6·5 W	0·7 S	1·1 W	6·4 N	2·5 E	1·1 N	0·1 E
26	8·3 N	3·1 W	4·9 N	0·8 W	9·5 N	5·6 W	4·1 N	3·9 W	0·4 S	7·9 W	0·4 N	9·8 W	0·7 N	14·6 W	0·5 S	13·8 W	0·9 S	1·2 W	3·2 N	1·9 W	6·8 N	0·8 E	5·1 N	2·2 W
27	9·5 N	2·8 W	6·3 N	4·0 W	3·3 N	5·0 W	5·6 S	4·6 W	2·1 N	7·7 W	0·0	11·2 W	3·1 S	15·8 W	0·6 N	10·6 W	7·4 N	1·3 W	0·5 N	1·0 E	8·0 N	1·9 E	10·4 N	0·6 W
28	5·3 N	0·2 E	3·5 N	4·9 W	1·1 N	4·9 W	4·9 S	3·2 E	1·8 N	8·2 W	0·8 N	8·5 W	0·9 S	13·6 W	2·4 N	9·1 W	7·9 N	4·9 W	5·2 N	0·5 W	4·9 N	2·5 E	8·3 N	1·0 E
29	4·6 N	1·0 W			4·4 N	7·1 W	0·9 S	2·1 E	0·5 S	7·4 W	4·1 S	0·9 E	2·3 N	10·9 W	1·9 N	14·2 W	5·9 N	6·1 W	5·6 N	2·3 W	7·6 N	1·4 E	5·6 N	2·4 E
30	9·8 N	3·2 W			2·6 N	6·0 W	9·2 S	1·5 W	2·1 S	7·1 W	3·7 S	2·8 W	1·1 S	15·1 W	2·2 N	9·7 W	5·2 N	2·8 W	5·3 N	0·0	5·2 N	0·0	3·3 N	0·1 E
31	7·4 N	0·6 W			9·5 N	6·9 W			0·2 S	7·7 W			3·8 S	13·7 W	4·8 N	11·2 W			1·4 N	2·6 E			5·2 N	0·4 E
Monthly Mean ...	6·5 N	0·9 W	8·1 N	2·3 W	4·6 N	4·0 W	2·2 N	4·7 W	0·7 N	7·3 W	3·4 S	6·6 W	2·8 S	14·2 W	1·5 S	15·3 W	3·1 N	6·7 W	1·9 N	2·7 W	4·4 N	0·9 E	4·4 N	1·1 E
Annual Variation ...	4·2 N	4·3 E	5·8 N	2·9 E	2·3 N	1·2 E	0·1 S	0·5 E	1·6 S	2·1 W	5·7 S	1·4 W	5·1 S	9·0 W	3·8 S	10·1 W	0·8 N	1·5 W	0·4 S	2·5 E	2·1 N	6·1 E	2·1 N	6·3 E

The Velocities of the Mean Components for the year are 2·3 N. and 5·2 W.

Velocity of Wind, 1901.

ROBINSON BECKLEY'S ANEMOGRAPH.

TABLE VIII.—*Mean Velocity of the Wind, in miles per hour, without regard to the direction from which it blew, for each Day of Bombay Civil Time; also the Mean Monthly Velocity, and its Variation from the Mean of the year.*

1901. Date.	MONTH. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1	11·0	9·4	6·2	9·5	7·8	7·0	**9·2**	17·0	12·3	7·8	7·8	7·0
2	8·5	8·2	5·4	**5·4**	7·5	8·1	9·7	19·7	13·9	7·0	6·9	**6·1**
3	7·7	**5·5**	5·5	8·7	7·5	8·4	13·5	18·3	**15·6**	6·9	7·5	6·8
4	**13·1**	10·0	5·2	9·1	9·2	8·9	12·2	18·2	12·9	6·2	8·4	7·4
5	8·7	9·8	7·7	9·3	10·7	7·9	13·6	18·2	11·0	9·8	7·0	7·0
6	10·2	11·5	7·0	6·1	10·1	**6·8**	20·7	18·0	8·3	11·4	8·4	8·2
7	8·6	12·5	7·5	9·0	7·8	10·5	20·5	18·5	6·5	9·2	**13·0**	9·9
8	10·3	11·4	8·8	7·7	7·4	14·2	**21·2**	**23·0**	6·0	11·5	9·0	10·9
9	12·0	6·6	7·5	9·0	9·2	8·4	20·3	19·4	8·9	10·7	9·1	11·0
10	11·5	9·5	6·5	8·5	9·5	**27·4**	14·8	17·9	9·2	8·7	7·5	**14·2**
11	7·1	13·5	6·0	7·8	9·8	26·1	19·9	16·7	9·9	5·8	6·3	9·0
12	**5·5**	12·8	8·7	9·2	**14·4**	16·4	17·3	13·6	10·5	6·6	7·4	8·6
13	8·5	13·2	10·8	9·6	12·2	13·3	16·8	14·9	10·1	8·6	10·5	6·9
14	9·4	11·5	11·2	11·9	10·0	15·2	18·2	19·3	10·1	9·2	7·8	8·2
15	11·5	8·1	10·6	**12·2**	9·0	14·2	13·7	17·3	12·8	6·4	6·7	7·3
16	8·3	6·0	10·0	9·9	8·7	15·9	15·9	14·5	12·1	5·3	6·4	8·6
17	10·5	8·4	10·8	8·0	9·7	17·3	16·5	14·6	10·1	**15·8**	6·8	7·1
18	12·4	9·0	7·1	6·5	9·0	13·0	20·2	**9·5**	9·0	10·7	9·3	7·1
19	11·2	15·0	**5·1**	6·0	7·4	10·8	15·7	10·2	8·2	**5·1**	8·7	8·0
20	10·2	13·1	9·2	7·2	8·0	9·7	16·8	13·5	8·6	6·0	6·7	7·8
21	9·8	**21·0**	5·9	6·6	**7·2**	11·6	16·1	14·8	8·7	6·8	**6·0**	7·8
22	9·2	15·4	8·0	8·1	7·4	13·7	17·5	16·5	7·8	9·4	6·3	8·0
23	8·9	14·3	10·1	8·4	9·0	9·2	17·0	20·7	**5·7**	8·0	7·7	6·3
24	8·2	11·0	**18·0**	10·1	10·0	8·6	17·0	20·7	7·7	7·0	10·1	6·3
25	8·4	11·3	15·5	11·7	7·6	9·5	16·7	17·3	6·7	5·3	12·0	6·4
26	10·4	7·0	11·7	8·6	8·3	10·2	15·0	13·9	5·9	6·4	10·5	8·1
27	10·9	8·3	8·1	11·0	8·5	11·2	16·4	10·7	11·3	5·6	11·2	11·8
28	7·6	6·4	6·4	9·3	9·2	9·4	13·7	10·1	10·2	7·7	10·5	10·0
29	8·5		8·7	9·7	7·8	11·2	11·7	14·5	9·0	8·2	10·0	9·5
30	11·0		6·5	11·5	7·9	8·8	15·4	10·3	7·0	7·8	8·7	8·7
31	9·7		12·3		7·8		14·5	12·2		7·1		8·8
Monthly Mean.	9·6	10·7	8·6	8·9	8·9	12·1	**16·1**	15·9	9·5	**8·0**	8·5	8·4
Annual Variation	−0·8	+0·3	−1·8	−1·5	−1·5	+1·7	+5·7	+5·5	−0·9	−2·4	−1·9	−2·0

	Miles.
The mean velocity for June to August	14·7
The mean velocity for September to May	9·0
The mean velocity for the year	10·4
The greatest monthly mean (that of July)	16·1
The least monthly mean (that of October)	8·0
Difference =	8·1
The greatest mean daily Velocity of Wind in the year (that of 10th June) was	27·4
The least do. do. do. (that of 19th March) was ...	5·1
Difference =	22·3

Velocity of Wind, 1901.

Dines' Anemograph.

Table VIII *a.*—*Mean Velocity of the Wind, in miles per hour, for each Day of Bombay Civil Time; also the Mean Monthly Velocity, and its Variation from the Mean of the year.*

1901.	MONTH.											
Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1	7·8	6·7	4·2	6·8	5·5	**4·5**	**6.7**	11·8	8·2	5·5	5·5	4·6
2	6·2	5·6	3·7	**3·7**	5·4	5·3	8·2	13·3	9·2	5·2	5·0	**3·9**
3	5·4	**4·0**	3·9	6·2	4·9	5·5	10·1	12·1	**10·1**	4·8	5·1	4·7
4	**9·4**	7·2	3·9	6·6	5·9	6·0	8·2	11·7	8·4	4·4	5·8	4·9
5	6·6	7·0	5·7	6·9	7·0	5·2	8·8	11·9	7·4	6·9	4·8	4·5
6	7·4	8·1	5·0	4·5	6·5	4·7	13·4	11·7	5·2	8·4	6·0	5·5
7	6·6	8·6	5·5	6·3	5·2	7·5	**13·7**	12·0	4·0	6·2	**9·4**	6·5
8	7·3	7·8	6·2	5·4	5·2	10·3	13·7	**15·0**	**3·9**	8·1	6·2	7·5
9	8·7	4·5	5·7	6·2	6·4	5·7	13·3	12·5	5·8	7·5	6·2	7·4
10	8·0	6·7	4·7	5·9	6·5	**19·7**	9·7	12·0	6·1	6·0	5·2	**9·4**
11	4·9	9·5	4·2	5·4	6·6	18·8	13·0	10·8	6·6	4·0	4·4	5·8
12	**3·8**	9·1	6·1	6·2	**10·1**	11·5	11·3	8·9	7·4	4·6	5·2	5·7
13	5·7	9·2	7·6	6·6	8·6	9·3	11·2	9·7	7·0	5·9	7·2	4·7
14	6·5	8·1	7·8	**8·4**	7·0	9·7	11·9	12·5	7·0	6·4	5·3	5·4
15	8·0	5·7	7·3	8·6	6·1	9·4	8·7	11·4	8·9	4·5	4·7	4·8
16	5·8	4·5	6·9	6·7	5·9	10·4	10·5	9·7	8·6	3·6	4·4	5·8
17	7·4	5·8	7.6	5·2	6·7	11·8	11·0	9·7	7·0	**11·0**	4·7	4·7
18	8·7	6·2	4·9	4·2	6·0	8·6	12·8	**6·1**	6·3	7·7	6·4	4·8
19	7·7	10·5	**3·5**	4·0	4·7	6·6	11·0	7·0	5·6	**3·5**	6·0	5·3
20	7·3	9·3	6·3	5·3	4·8	6·1	11·5	8·8	6·0	4·6	4·6	5·5
21	7·0	**14·5**	4·2	4·6	**4·5**	7·7	10·4	9·5	6·3	5·0	**4·2**	5·1
22	6·5	10·6	5·7	5·9	4·8	8·6	11·4	10·9	5·4	6·6	4·4	5·5
23	6·1	9·7	7·2	6·0	5·9	6·1	11·2	13·5	3·9	5·3	5·1	4·3
24	5·6	7·2	**12·6**	7·2	6·5	6·3	11·1	13·2	5·0	4·7	7·1	4·3
25	6·2	7·3	10·9	8·5	5·1	6·4	11·0	11·4	4·2	4·3	8·1	4·7
26	7·2	4·7	8·2	6·1	5·5	6·3	9·5	9·0	4·5	4·5	7·1	5·8
27	7·7	5·6	5·6	7·9	5·9	6·9	10·4	7·1	8·0	3·9	7·6	8·2
28	5·2	4·4	4·5	7·0	6·3	6·2	8·8	6·7	7·2	5·4	7·0	6·6
29	6·0		6·3	7·7	5·3	8·7	7·9	9·7	6·2	5·7	6·7	6·2
30	7·8		4·7	**9·1**	5·3	6·7	9·9	6·8	4·9	5·3	5·5	5·8
31	6·9		8·7		5·3		9·5	8·2		5·0		5·7
Monthly Mean.	6·8	7·4	6·1	6·3	6·0	8·2	**10·6**	10·5	6·5	**5·6**	5·8	5·6
Annual Variation.	−0·3	+0·3	−1·0	−0·8	−1·1	+1·1	+3·5	+3·4	−0·6	−1·5	−1·3	−1·5

	Miles.
The mean velocity for June to August	... 9·8
The mean velocity for September to May	... 6·2
The mean velocity for the year	... 7·1
The greatest monthly mean (that of July)	...10·6
The least monthly mean (that of October)	... 5·6
Difference =	5·0
The greatest mean daily Velocity of Wind in the year (that of 10th June) was ...	...19·7
The least do. do. do. (that of 19th March) was ...	... 3·5
Difference =	16·2

Aggregate and Mean Velocities and Relative Frequency of Different Winds, 1901.

TABLE IX.—*Showing, for the year 1901, the sums of the Velocities, and the Mean Velocities, in miles per hour, of the Winds which blew in each Month, from each of the sixteen Principal Directions: and also the number of hourly Observations which those sums comprise; the latter numbers indicating the Relative Frequency of the same Wind (as to direction) in the several Months, and of different Winds during the same Month.*

1901.	N.			N.N.E.			N.E.			E.N.E.			E.			E.S.E.			S.E.			S.S.E.		
Month.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.
	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.
January ...	1,053	126	8·4	638	94	6·8	322	46	7·0	703	81	8·7	329	40	8·2	138	23	6·0	4	1	4·0	19	2	9·5
February ...	940	104	9·0	527	69	7·6	430	55	7·8	473	53	8·9	119	16	7·4	56	9	6·2	13	2	6·5	0	0	0·0
March ...	417	58	7·2	178	32	5·6	212	36	5·9	295	49	6·0	75	12	6·2	22	5	4·4	39	8	4·9	42	8	5·2
April ...	148	24	6·2	131	25	5·2	99	22	4·5	117	17	6·9	93	12	7·7	116	13	8·9	183	23	8·0	95	14	6·8
May ...	85	10	8·5	69	10	6·9	64	5	12·8	13	1	13·0	50	10	5·0	0	0	0·0	0	0	0·0	27	2	13·5
June ...	12	3	4·0	79	10	7·9	85	11	7·7	109	10	10·9	92	11	8·4	44	4	11·0	311	16	19·4	719	37	19·4
July ...	10	2	5·0	0	0	0·0	0	0	0·0	0	0	0·0	0	0	0·0	69	6	11·5	114	13	8·8	134	11	12·2
August ...	6	2	3·0	0	0	0·0	0	0	0·0	0	0	0·0	0	0	0·0	0	0	0·0	0	0	0·0	0	0	0·0
September ...	114	19	6·0	67	12	5·6	53	11	4·8	115	16	7·2	52	7	7·4	72	7	10·3	82	10	8·2	40	6	6·7
October ...	237	41	5·8	74	15	4·9	133	28	4·7	228	31	7·4	228	33	6·9	121	18	6·7	131	16	8·2	349	32	10·9
November ...	355	47	7·6	239	41	5·8	471	68	6·9	1,340	154	8·7	686	88	7·8	127	12	10·6	45	6	7·5	36	5	7·2
December ...	431	68	6·3	238	41	5·8	734	100	7·3	1,361	146	9·3	631	70	9·0	105	13	8·1	20	4	5·0	21	3	7·0
Year ...	3,808	504	7·6	2,240	349	6·4	2,603	382	6·8	4,754	558	8·5	2,355	299	7·9	870	110	7·9	942	99	9·5	1,482	120	12·3

1901.	S.			S.S.W.			S.W.			W.S.W.			W.			W.N.W.			N.W.			N.N.W.			No. of Observations.	
Month.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Sum of Velocities.	Number of Observations.	Mean Velocity.	Calm.	Variable.
	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.	Miles.		Miles.		
January ...	40	4	10·0	0	0	0·0	17	2	8·5	154	17	9·1	150	21	7·1	252	27	9·3	1,273	110	11·6	2,081	150	13·9	0	0
February ...	0	0	0·0	0	0	0·0	0	0	0·0	30	4	7·5	87	19	4·6	421	59	7·5	1,806	127	14·2	2,270	154	14·7	1	0
March ...	74	7	10·6	94	12	7·8	84	21	4·0	120	15	8·0	372	45	8·3	1.407	173	8·1	1,802	164	11·0	1,200	97	12·4	2	0
April ...	264	27	9·8	349	30	11·6	134	18	7·4	295	39	7·6	589	77	7·6	1,683	163	10·3	1,604	161	10·0	479	54	8·9	0	1
May ...	46	5	9·2	84	11	7·6	405	56	7·2	1,287	150	8·6	1,940	218	8·9	1,799	184	9·8	582	63	9·2	170	18	9·4	1	0
June ...	917	50	18·3	441	41	10·8	484	63	7·7	1,733	169	10·3	2,522	203	12·4	724	58	12·5	368	26	14·2	69	8	8·6	0	0
July ...	307	21	14·6	118	12	9·8	475	37	12·8	3,781	235	16·1	6,083	350	17·4	787	51	15·4	51	4	12·7	9	1	9·0	0	1
August ...	9	1	9·0	60	9	6·7	127	13	9·8	3,657	232	15·8	7,012	406	17·3	937	75	12·5	25	2	12·5	23	4	5·7	0	0
September...	32	6	5·3	0	0	0·0	17	3	5·7	403	52	7·7	2,148	211	10·2	1,271	135	9·4	1,832	170	10·8	562	55	10·2	0	0
October ...	495	48	10·3	155	20	7·7	42	14	3·0	186	39	4·8	218	38	5·7	1,163	131	8·9	1,667	166	10·0	526	70	7·5	4	0
November ...	0	0	0·0	0	0	0·0	4	1	4·0	0	0	0·0	114	14	8·1	831	100	8·3	843	85	9·9	1,012	99	10·2	0	0
December ...	0	0	0·0	0	0	0·0	8	2	4·0	42	6	7·0	244	33	7·4	659	80	8·2	784	88	8·9	942	90	10·5	0	0
Year ...	2,184	169	12·9	1,301	135	9·6	1,797	230	7·8	11,688	958	12·2	21,479	1,635	13·1	11,954	1,236	9·7	12,637	1,166	10·8	9,343	800	11·7	8	2

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Temperature of the Ground, 1901.

TABLE X.—*Showing, for each Month, the Mean Temperature of the Ground, and its Annual Variation, at the respective depths of* 1, 9, 20, 60 *and* 132 *inches below the surface.*

Depth.	1 Inch.		9 Inches.		20 Inches.		60 Inches.		132 Inches.	
Month.	Mean Temperature.	Excess over the yearly Mean.	Mean Temperature.	Excess over the yearly Mean.	Mean Temperature.	Excess over the yearly Mean.	Mean Temperature.	Excess over the yearly Mean.	Mean Temperature.	Excess over the yearly Mean.
	°	°	°	°	°	°	°	°	°	°
January ...	75·8	−6·4	78·3	−5·4	82·9	−3·8	85·6	−1·5	85·2	−0·4
February...	**75·2**	−7·0	**77·4**	−6·3	**81·8**	−4·9	84·7	−2·4	84·7	−0·9
March ...	81·6	−0·6	82·1	−1·6	83·9	−2·8	**84·6**	−2·5	**84·5**	−1·1
April ...	85·7	+3·5	86·1	+2·4	87·7	+1·0	86·5	−0·6	84·8	−0·8
May ...	**88·3**	+6·1	**88·6**	+4·9	90·4	+3·7	88·4	+1·3	85·5	−0·1
June ...	85·4	+3·2	87·5	+3·8	**90·6**	+3·9	**89·8**	+2·7	86·3	+0·7
July ...	82·9	+0·7	85·4	+1·7	88·6	+1·9	89·1	+2·0	**86·6**	+1·0
August ..	82·0	−0·2	84·4	+0·7	87·4	+0·7	87·8	+0·7	86·2	+0·6
September.	83·5	+1·3	85·0	+1·3	87·4	+0·7	87·3	+0·2	86·0	+0·4
October ..	83·2	+1·0	84·8	+1·1	87·4	+0·7	87·4	+0·3	86·0	+0·4
November .	82·8	+0·6	84·0	+0·3	87·1	+0·4	87·6	+0·5	86·0	+0·4
December .	79·9	−2·3	81·3	−2·4	85·0	−1·7	86·7	−0·4	85·8	+0·2
Year ...	82·2		83·7		86·7		87·1		85·6	

Extent of Cloudy Sky, 1901.

TABLE XI.—*Means of Estimations made at 6, 10, 14, 16 and 22 hours daily, the whole Sky being reckoned as 10.*

1901. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	0·2	1·4	0·4	6·0	1·6	2·4	9·4	9·8	6·4	0·6	2·0	...
2	...	0·6	...	2·0	4·0	3·6	8·0	9·8	8·2	1·4	1·8	...
3	0·4	5·2	1·0	1·8	6·4	2·8	9·4	10·0	7·8	3·4	2.0	...
4	0·8	...	1·8	1·0	5·4	4·6	10·0	10·0	7·2	2·4	2·0	...
5	...	5·8	1·6	4·0	4·4	3·2	10·0	10.0	7·0	1·4	1·4	...
6	...	3·0	...	1·2	5·0	4·8	10·0	8·6	4·6	4·2	3·0	...
7	3·8	...	1·2	2·4	1·2	5·8	10·0	9·6	3·8	2·4	2·0	...
8	5·0	...	0·4	...	2·2	6·2	8·8	10·0	2·8	2·6	1·2	1·2
9	...	...	...	...	2·4	5·0	7·6	10·0	3·2	1·6	1·4	...
10	...	...	0·8	0·6	0·6	7·2	8·0	10·0	3·6	3·4	4·6	...
11	...	0·2	2·8	1·0	0·8	8·6	8·4	8·2	7·0	1·4	2·0	...
12	0·4	...	2·4	0·8	2·0	9·4	7·4	8·4	4·6	0·8	2·0	...
13	9·4	...	0·6	2·4	2·4	10·0	8·8	8·6	4·8	2·6	1·0	0·4
14	8·2	...	...	0·2	5·0	8·8	8·4	10·0	7·2	1·8	2·4	2·0
15	3·4	...	2·0	1·6	1·2	8·0	7·4	7·4	4·2	6·8	3·4	1·6
16	0·2	...	...	0·2	2·6	7·2	9·0	7·2	2·6	10·0	2·4	1·8
17	2·8	...	...	...	2·0	7·4	9·8	7·6	8·4	9·2	1·4	6·6
18	3·0	5·0	5·4	0·6	2·6	8·4	10·0	9·0	6·0	1·4	2·4	4·6
19	1·2	7·0	7·4	0·6	1·0	9·6	7·6	9·4	5·4	1·6	0·8	4·6
20	1·6	7·2	3·8	...	2·6	9·6	9·0	8·0	6·2	2·6	2·6	8·2
21	...	7·0	7·4	4·6	2·4	8·6	9·4	9·2	5·4	3·4	1·0	8·8
22	...	3·6	2·0	2·2	2·8	6·4	9·2	10·0	7·8	5·8	0·2	7·6
23	...	0·4	1·0	2·6	4·6	8·0	10·0	9·0	9·0	3·8	1·6	7·4
24	0·6	0·8	1·0	3·4	2·2	9·4	10·0	9·2	7·2	6·2	1·2	3·2
25	4·4	0·2	...	1·2	2·2	6·8	10·0	9·8	2·6	2·2	...	1·2
26	5·2	0·4	...	6·4	2·0	7·0	10·0	8·6	3·4	1·0	1·4	2·4
27	...	5·4	1·8	7·6	2·6	7·6	8·6	6·4	1·2	2·4	...	5·6
28	...	4·2	0·4	10·0	4·8	10·0	9·6	8·8	7·2	...	...	3·2
29	...		2·6	8·2	2·4	10·0	10·0	9·0	2·4	...	...	2·4
30	5·8		2·0	5·2	4·6	9·8	6·8	8·4	0·4	0·4	...	5·4
31	...		0·8		5·2		7·8	7·0		...		5·0
Monthly Mean .	1·8	2·0	1·6	2·6	2·9	7·2	9·0	8·9	5·3	2·8	1·6	2·7
Annual Variation ...	−2·2	−2·0	−2·4	−1·4	−1·1	+3·2	+5·0	+4·9	+1·3	−1·2	−2·4	−1·3

For the days which have no entry, 0·0 is to be understood.

Mean of the months from January to April, November and December ... ... 2·0

Mean of the months from May to October ... ... 6·0

Mean for the year ... ... 4·0

Rainfall, 1901.

TABLE XII.—*Total Fall of Rain (in inches) as measured by Newman's Gauge, placed 4½ feet above the ground.*

1901. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.
	in.			in.	in.	in.	in.	in.	in.	in.		
1	...	...	...	...	...	...	0·18	0·41	...	...	..	...
2	...	...	...	...	...	...	0·09	0·46	0·05	...	...	...
3	...	...	...	...	...	...	0·33	0·62	0·12	...	...	...
4	...	...	...	...	...	...	1·09	2·45	0·29	...	...	...
5	...	...	...	...	0·01	...	1·93	1·60	0·03	...	...	...
6	...	...	...	...	...	...	3·52	0·26	...	...	...	...
7	...	...	...	...	...	0·63	1·98	1·00	...	...	...	...
8	...	...	...	...	...	0·56	0·04	0·71	0·09	...	...	...
9	...	...	...	...	...	0·71	0·11	**2·94**	...	...	...	...
10	...	...	...	...	...	0·07	0·42	0·07	0·01	...	...	...
11	...	...	...	...	...	0·45	0·19	0·03	**0·83**	...	...	...
12	...	...	...	...	...	1·14	0·74	0·02	0·39	...	...	...
13	...	**0·72**	...	...	...	**6·55**	0·30	0·11	...	...	...	...
14	...	0·02	...	...	...	0·66	0·18	0·55	...	...	...	...
15	...	...	...	...	...	0·23	...	0·07	...	...	...	...
16	...	...	...	...	...	0·03	0·09	0·01	...	0·05	...	...
17	...	...	...	...	...	0·01	1·55	0·27	...	**0·30**	...	...
18	...	...	...	...	...	0·94	3·40	0·07	...	...	...	...
19	...	...	...	...	...	5·09	0·02	0·59	...	...	...	...
20	...	...	...	...	...	1·16	0·30	0·23	...	...	...	...
21	...	..	...	...	...	1·32	0·03	0·02	...	...	...	...
22	...	...	...	...	...	0·25	0·19	0·23	...	0·04	...	...
23	...	...	...	...	...	0·14	1·04	0·09	...	...	...	...
24	...	...	...	...	...	0·20	2·94	0·16	...	...	...	...
25	...	...	...	...	...	0·13	3·07	0·02	...	...	...	...
26	...	...	...	...	...	0·11	**4·79**	...	...	...	...	...
27	...	...	...	...	...	0·05	0·01	...	...	...	...	...
28	...	...	...	**0·04**	...	1·16	0·25	0·80	...	...	...	...
29	...	...	...	...	...	2·95	3·57	0·08	...	...	...	...
30	...	...	...	...	...	0·82	0·24	0·33	...	...	...	...
31	...		...		...		0·11	0·07		...		...
Monthly Total.	0·74	...	...	0·04	0·01	25·36	**32·70**	14·27	1·81	0·39	...	...
Number of rainy days.	2	...	...	1	1	24	30	29	8	3	...	...

Total fall of rain in the year ... ... 75.32 inches.
Total number of rainy days in the year 98
The greatest daily fall of rain in the year (that of 13th June) was ... ... 6·55 inches.

No rain fell in the months of February, March, November and December, nor on any of the days left blank in the above table.

TABLE XIII.—Five-day Means, 1901.

Number of Five-day Period.	Barometric Pressure.	Temperature of the Air.	Pressure of Vapour.	Additional Capacity of the Air.	* Rainfall.	North or South Component of Wind.	East or West Component of Wind.	Number of Five-day Period.	Barometric Pressure.	Temperature of the Air.	Pressure of Vapour.	Additional Capacity of the Air.	* Rainfall.	North or South Component of Wind.	East or West Component of Wind.
	In.	°	In.	In.	In.	Miles.	Miles.		In.	°	In.	In.	In.	Miles.	Miles.
1	29·908	72·1	0·513	0·280	...	7·2 N.	0·4 E.	38	29·606	80·9	0·932	0·122	7·58	3·8 S.	18·2 W.
2	·927	73·4	·547	·278	...	5·4 N.	1·7 W.	39	·683	82·1	·928	·168	1·83	3·1 S.	16·7 W.
3	·974	73·3	·660	·165	0·74	4·3 N.	1·0 E.	40	·668	81·6	·922	·160	5·06	1·5 S.	15·7 W.
4	·982	70·8	·498	·259	...	8·2 N.	1·7 W.	41	·702	81·3	·921	·148	4·50	2·1 S.	16·1 W.
5	30·003	74·1	·625	·222	...	6·5 N.	1·1 W.	42	·651	79·7	·910	·106	11·69	0·6 N.	14·2 W.
6	29·953	74·5	·620	·237	...	7·5 N.	2·0 W.	43	·689	80·7	·903	·144	1·84	1·0 S.	16·6 W.
7	·886	77·5	·687	·261	...	5·2 N.	1·6 W.	44	·628	79·2	·903	·096	6·02	2·3 S.	18·6 W.
8	·963	70·5	·474	·276	...	7·9 N.	2·5 W.	45	·684	80·3	·899	·137	3·17	1·8 S.	16·0 W.
9	·932	70·2	·393	·350	...	9·2 N.	1·8 W.	46	·669	80·5	·906	·133	0·97	4·1 S.	14·1 W.
10	·974	70·8	·494	·266	...	6·2 N.	2·4 W.	47	·717	79·8	·889	·130	1·16	3·1 S.	14·1 W.
11	·966	70·5	·425	·331	...	13·6 N.	3·2 W.	48	·772	80·7	·877	·171	0·98	0·0	14·2 W.
12	·900	76·3	·634	·279	...	4·5 N.	2·4 W.	49	·840	80·7	·870	·178	0·53	2·8 N.	12·1 W.
13	·922	74·8	·705	·161	...	2·9 N.	3·3 W.	50	·840	81·0	·859	·200	0·44	0·0	10·6 W.
14	·891	76·4	·721	·195	...	4·3 N.	3·6 W.	51	·867	80·4	·823	·216	1·32	0·3 S.	5·8 W.
15	·869	82·3	·655	·455	...	7·2 N.	2·4 W.	52	·850	81·1	·882	·180	...	8·0 N.	5·4 W.
16	·889	80·4	·836	·205	...	0·1 N.	3·0 W.	53	·801	82·0	·921	·174	...	5·0 N.	6·4 W.
17	·902	81·5	·744	·336	...	9·8 N.	5·8 W.	54	·827	81·5	·861	·218	...	1·1 N.	4·4 W.
18	·865	79·9	·799	·223	...	4·2 N.	6·0 W.	55	·823	81·3	·913	·157	...	4·4 N.	3·6 W.
19	·831	81·6	·866	·217	...	0·9 N.	4·1 W.	56	·777	81·0	·878	·182	...	3·6 N.	5·9 W.
20	·819	82·6	·821	·296	...	3·5 N.	4·6 W.	57	·844	80·1	·877	·154	...	5·9 N.	4·9 W.
21	·754	83·4	·876	·271	...	5·8 N.	6·5 W.	58	·801	78·8	·863	·123	0·35	0·6 S.	3·4 W.
22	·746	83·1	·854	·281	...	1·2 N.	5·5 W.	59	·871	80·6	·889	·160	0·04	2·2 S.	0·9 W.
23	·755	82·9	·848	·282	...	4·8 N.	6·7 W.	60	·880	82·2	·920	·182	...	0·9 N.	0·8 W.
24	·754	85·8	·902	·335	0·04	3·3 S.	0·9 W.	61	·859	81·8	·809	·282	...	4·5 N.	0·5 W.
25	·831	85·5	·889	·339	0·01	1·2 S.	6·9 W.	62	·874	83·2	·832	·309	...	3·6 N.	0·7 E.
26	·796	84·6	·848	·344	...	2·6 N.	7·4 W.	63	·869	80·6	·675	·375	...	4·4 N.	2·8 E.
27	·785	85·8	·926	·314	...	4·1 N.	6·5 W.	64	·822	80·0	·771	·261	...	3·5 N.	0·9 E.
28	·799	85·4	·880	·343	...	1·8 N.	7·9 W.	65	·861	80·9	·745	·313	...	4·1 N.	0·4 W.
29	·737	86·4	·902	·359	...	3·1 S.	7·4 W.	66	·884	78·5	·618	·362	...	4·5 N.	0·5 E.
30	·756	86·3	·941	·315	...	0·2 N.	7·7 W.	67	·900	77·7	·602	·356	...	5·9 N.	1·4 E.
31	·741	86·7	·919	·357	...	2·3 S.	7·3 W.	68	·962	78·8	·718	·274	...	2·4 N.	0·0
32	·592	86·0	·963	·286	1·90	2·7 N.	4·0 W.	69	·996	77·9	·573	·389	...	6·1 N.	3·3 E.
33	·634	81·1	·935	·130	8·87	13·9 S.	3·3 W.	70	·940	76·1	·628	·279	...	4·9 N.	0·6 W.
34	·695	83·0	·961	·171	6·30	1·1 N.	13·3 W.	71	·951	77·3	·632	·312	...	3·5 N.	2·8 E.
35	·726	81·5	·927	·148	3·07	5·1 S.	6·8 W.	72	·954	76·5	·643	·273	...	2·9 N.	0·3 E.
36	·706	82·0	·920	·178	4·40	2·2 S.	5·9 W.	73	·925	76·9	·638	·293	...	6·6 N.	0·7 E.
37	·624	79·6	·905	·106	2·51	7·2 S.	1·7 W.								

* Five-day sums, *not means*.

TABLES OF DISTURBANCES

OF

MILNE'S SEISMOGRAPH AND COLABA SEISMOGRAPHS,

1900 AND 1901.

B 428—9 Rez

TABLE I.—List of Principal Disturbances registered by Milne's Seismograph at Colaba, Bombay.

1900 and 1901.

Observatory Number.	Date.	Time of disturbance in G. M. T. Beginning.	Maximum.	End.	Amplitude or half the complete range of Maximum motion.	Remarks.
		H. m.	H. m.	H. m.	Millimetres.	
1 ...	1899, December 31 ...	20 27·7	20 33·8	20 49·6	1·4	Sensibility 1 m. m. = 0″·76.
4 ...	1900, January 4 ...	19 13·8	.....	19 21·8	.....	
5 ...	„ „ 5 ...	19 6·4	19 33·7	20 9·4	1·0	
10 ...	„ „ 11 ...	.....	9 32·2	9 43·8	0·9	Beginning and maximum appear to be simultaneous. Sensibility 1 m. m. = 0″·62.
14 ...	„ „ 16 ...	8 48·1	.....	8 53·0	.....	Sensibility 1 m. m. = 0″·55.
15 ...	„ „ 17 ...	6 23·8	.....	6 31·2	.....	
24 ...	„ „ 20 ...	7 57·4	8 6·4	8 13·2	0·6	
32 ...	„ „ 29 ...	.....	22 50·3	.....	6·0	This disturbance unfortunately occurred on the day when, for investigational purposes, the method of suppression of tremors was specially discontinued to note its effect; the beginning and end of the disturbance are therefore masked by tremors and cannot be exactly determined.
38 ...	„ February 7 ...	21 51·1	21 51·3	21 56·1	0·9	Dislocation west at 21 h. 51·2 m. Shock perceptible in Bombay.
104 ...	„ April 24 ...	23 23·4	23 28·9	23 51·0	0·6	
110 ...	„ May 2 ...	11 58·3	.....	.....	.....	Single shock. Sensibility 1 m. m. = 0″·52.
119 ...	„ „ 4 ...	9 34·5	.....	9 40·3	.....	
134 ...	„ „ 11 ...	17 57·9	18 1·4	18 7·6	0·6	Commencement of preliminary tremors at 17 h. 42·3 m.
148 ...	„ June 4 ...	10 34·9	.....	10 40·1	.....	
186 ...	„ July 29 ...	7 25·2	.....	7 26·0	.....	Sensibility 1 m. m. = 0″ 53.
192 ...	„ „ 31 ...	10 45·1	.....	10 49·9	.....	
212 ...	„ September 1 ...	18 50·0	.....	19 46·7	.....	Sensibility 1 m. m. = 0″·73.
213 ...	„ „ 1—2 ...	23 34·9	.....	0 46·4	.....	
214 ...	„ „ 2 ...	2 9·4	.....	2 57·1	.....	
215 ...	„ „ 2 ...	5 9·1	.....	5 51·2	.....	
217 ...	„ „ 2 ...	11 33·8	.....	11 55·0	.....	
225 ...	„ „ 9 ...	22 55·7	23 2·8	23 30·4	0·8	
234 ...	„ „ 17—18 ...	22 7·1	22 23·4	0 54·5	1·9	
237 ...	„ „ 20 ...	19 16·4	19 32·7	19 55·5	0·5	
260 ...	„ October 7 ...	21 14·6	21 37·6	22 49·2	0·7	
264 ...	„ „ 9 ...	12 52·2	13 20·7	15 40·6	6·0	
265 ...	„ „ 10 ...	3 5·6	3 9·4	3 42·7	5·0	
284 ...	„ „ 29 ...	9 32·5	10 56·1	12 26·9	2·2	
295 ...	„ November 5 ...	8 6·7	8 19·7	8 45·9	0·9	
300 ...	„ „ 9 ...	18 20·6	18 35·2	18 55·4	1·0	
304 ...	„ „ 11 ...	4 23·8	4 26·4	4 31·3	0·6	
306 ...	„ „ 12 ...	1 20·1	1 31·2	2 37·8	1·0	
313 ...	„ „ 16 ...	21 27·1	21 36·1	22 2·0	2·7	
321 ...	„ „ 24 ...	8 14·8	8 40·1	9 27·1	1·6	
334 ...	„ „ 30 ...	13 41·9	.....	14 5·1	.....	
378 ...	„ December 25 ...	5 14·0	5 45·1	6 20·6	5·1	After-tremors ended at 6 h. 56·3 m.

1901.

10 ...	1901, January 7 ...	1 52·7	2 3·0	3 45·2	2·0	
74 ...	„ February 15 ...	8 3·2	8 19·0	8 51·2	1·0	Sensibility 1 m. m. = 0″·76.
191 ...	„ April 5—6 ...	23 42·1	0 14·6	1 42·1	9·8	
195 ...	„ „ 6 ...	21 2·3	21 36·6	22 6·8	0·9	
244 ...	„ „ 27 ...	4 7·4	4 10·2	4 25·0	3·6	
260 ...	„ May 7 ...	10 28·3	10 30·4	11 17·8	0·8	
304 ...	„ „ 25 ...	0 52·1	1 27·6	2 21·5	1·0	
341 ...	„ June 13 ...	4 1·5	.....	4 27·8	.....	
358 ...	„ „ 24 ...	7 11·7	7 40·6	8 51·4	2·1	
431 ...	„ August 6 ...	18 46·0	18 51·7	19 17·1	1·5	
437 ...	„ „ 9 ...	9 34·3	10 3·8	11 21·3	2·8	
438 ...	„ „ 9 ...	13 15·6	14 19·9	16 39·1	5·1	
439 ...	„ „ 9 ...	18 44·7	19 14·4	20 47·8	10·6	
522 ...	„ September 7 ...	0 42·0	.....	1 41·3	.....	
524 ...	„ „ 7 ...	22 52·9	.....	23 38·3	.....	
526 ...	„ „ 8 ...	17 55·9	.....	19 16·9	.....	
531 ...	„ „ 10 ...	4 31·7	4 37·6	4 54·6	0·7	
563 ...	„ „ 24 ...	8 18·1	.....	9 0·1	.....	Sensibility 1 m. m. = 0″·62.
579 ...	„ „ 30 ...	10 28·8	10 58·4	11 32·0	1·0	
597 ...	„ October 8 ...	2 38·5	.....	4 43·7	.....	
610 ...	„ „ 17 ...	5 54·1	6 5·0	7 21·5	1·5	
612 ...	„ „ 19 ...	9 14·9	.....	11 26·9	.....	
624 ...	„ November 8 ...	6 37·9	.....	7 18·5	.....	
625 ...	„ „ 8 ...	10 29·7	.....	11 31·7	.....	
634 ...	„ „ 15 ...	20 46·2	.....	22 31·1	.....	
638 ...	„ „ 18 ...	0 7·4	0 12·6	1 13·7	4·0	
645 ...	„ „ 25 ...	1 58·7	.....	2 42·0	.....	
662 ...	„ December 6 ...	14 51·7	.....	15 25·4	.....	
666 ...	„ „ 9 ...	3 21·3	.....	4 6·9	.....	
669 ...	„ „ 14—15 ...	23 6·7	23 31·4	0 46·1	3·3	
678 ...	„ „ 26 ...	10 41·7	.....	11 39·1	.....	
683 ...	„ „ 30—31 ...	22 56·6	23 33·4	0 41·6	0·7	
687 ...	„ „ 31 ...	9 15·5	10 0·7	11 35·4	2·6	

TABLE II.—List of Principal Disturbances registered by Colaba (E.-W.) Seismograph at Colaba, Bombay.

April 1900 to December 1901.

Observatory Number.	Date.	Time of Disturbance in G. M. T. Beginning.	Maximum.	End.	Amplitude or half the complete range of Maximum motion.	Remarks.
		H. m.	H. m.	H. m.	Millimetres.	
1	1900 April 24	23 23·5	23 28·9	23 48·2	1·0	* Sensibility 1 m. m. = 0″·17.
2	„ May 2	11 56·3	11 58·1	12 2·0	0·6	„ „ = 0″·25.
3	„ October 7	.....	.....	.....	...	Movements very small and therefore difficult to locate the phases exactly.
4	„ „ 9	12 52·9	13 19·6	15 14·7?	53·0	Sensibility 1 m. m. = 0″·12.
5	„ „ 10	3 5·5	3 10·3	3 36·3	7·0	„ „ = 0″·12.
6	„ „ 29	9 32·8	10 31·3	12 14·0	4·4	„ „ = 0″·28.
7	„ November 5	.....	.....	.....	...	Movements very small and therefore difficult to locate the phases exactly.
8	„ „ 9	.....	.....	.....	...	Do. do.
9	„ „ 11	4 24·0	4 25·5	4 33·0	0·2	Sensibility 1 m. m. = 0″·07.
10	„ „ 12	1 18·6	1 30·2	1 39·0?	0·2	„ „ = 0″·17.
11	„ „ 16	21 27·0	21 32·3	22 1·3	0·6	„ „ = 0″·11.
12	„ „ 24	8 16·1	8 38·1	9 15·2	0·7	„ „ = 0″·21.
13	„ December 25	5 14·2	5 41·2	6 19·2	4·6	„ „ = 0″·09.

1901.

1	1901 January 7	1 47·9	2 4·3	3 38·9	2·7	Sensibility 1 m. m. = 0″·10.
2	„ February 15	8 7·1	8 18·4	9 0·3	0·5	„ „ = 0″·14.
3	„ April 6	.....	.....	.....	...	Movements very small and therefore difficult to locate the phases exactly.
4	„ „ 27	4 5·2	4 9·1	4 18·0	2·2	Sensibility 1 m. m. = 0″·24.
5	„ May 7	.....	.....	.....	...	Movements very small and therefore difficult to locate the phases exactly.
6	„ „ 25	.....	.....	.....	...	Do. do.
7	„ June 24	7 13·5	7 43·2	8 12·7	1·1	Sensibility 1 m. m. = 0″·12.
8	„ August 6	18 49·0	18 50·9	19 8·1?	0·6	„ „ = 0″·16.
9	„ „ 9	9 34·2	10 3·1	11 6·4?	1·9	„ „ = 0″·10.
10	„ „ 9	13 21·1	13 30·6 13 50·2 14 24·1	16 30·3	0·8 0·6 0·5	„ „ = 0″·21.
11	„ „ 9	18 53·0	19 13·7	20 3·6	6·0	„ „ = 0″·21.
12	„ September 8	17 49·7	18 41·0	19 12·1	very small.	
13	„ „ 10	4 29·9	4 39·4	4 49·8	0·4	„ „ = 0″·12.
14	„ „ 24	.....	.....	.....	...	Movements very small and therefore difficult to locate the phases exactly.
15	„ „ 30	.....	.....	.....	...	Do. do.
16	„ October 8	.....	.....	.....	...	Do. do.
17	„ „ 17	5 44·6	6 2·1	7 19·1	1·0	Sensibility 1 m. m. = 0″·06.
18	„ „ 19	.....	.....	.....	...	Movements very small and therefore difficult to locate the phases exactly.
19	„ November 8	.....	.....	.....	...	Do. do.
20	„ „ 8	.....	.....	.....	...	Do. do.
21	„ „ 15	.....	.....	.....	...	Do. do.
22	„ „ 25	1 58·0	2 14·3	2 37·3	0·6	Sensibility 1 m. m. = 0″·07.
23	„ December 6	.....	.....	.....	...	Movements very small and therefore difficult to locate the phases exactly.
24	„ „ 9	.....	.....	.....	...	Do. do.
25	„ „ 14	23 5·3	23 13·2 23 30·8	23 50·5	0·8 0·4	Sensibility 1 m. m. = 0″·11.
26	„ „ 26	.....	.....	.....	...	Movements very small and therefore difficult to locate the phases exactly.
27	„ „ 31	9 11·9	9 58·1	11 33·3	5·5	Sensibility 1 m. m. = 0″·07.

* The sensibility of the Colaba Seismograph about 3 to 4 times as great as that of Milne's refers to tilting movements. The ratios of the amplitudes of the actual movements show different results altogether and presumably therefore the dominant feature of the movements in the majority of disturbances does not indicate tilt.

TABLE III.—List of Principal Disturbances, registered by Colaba (N.-S.) Seismograph at Colaba, Bombay.

From October 1900 to December 1901.

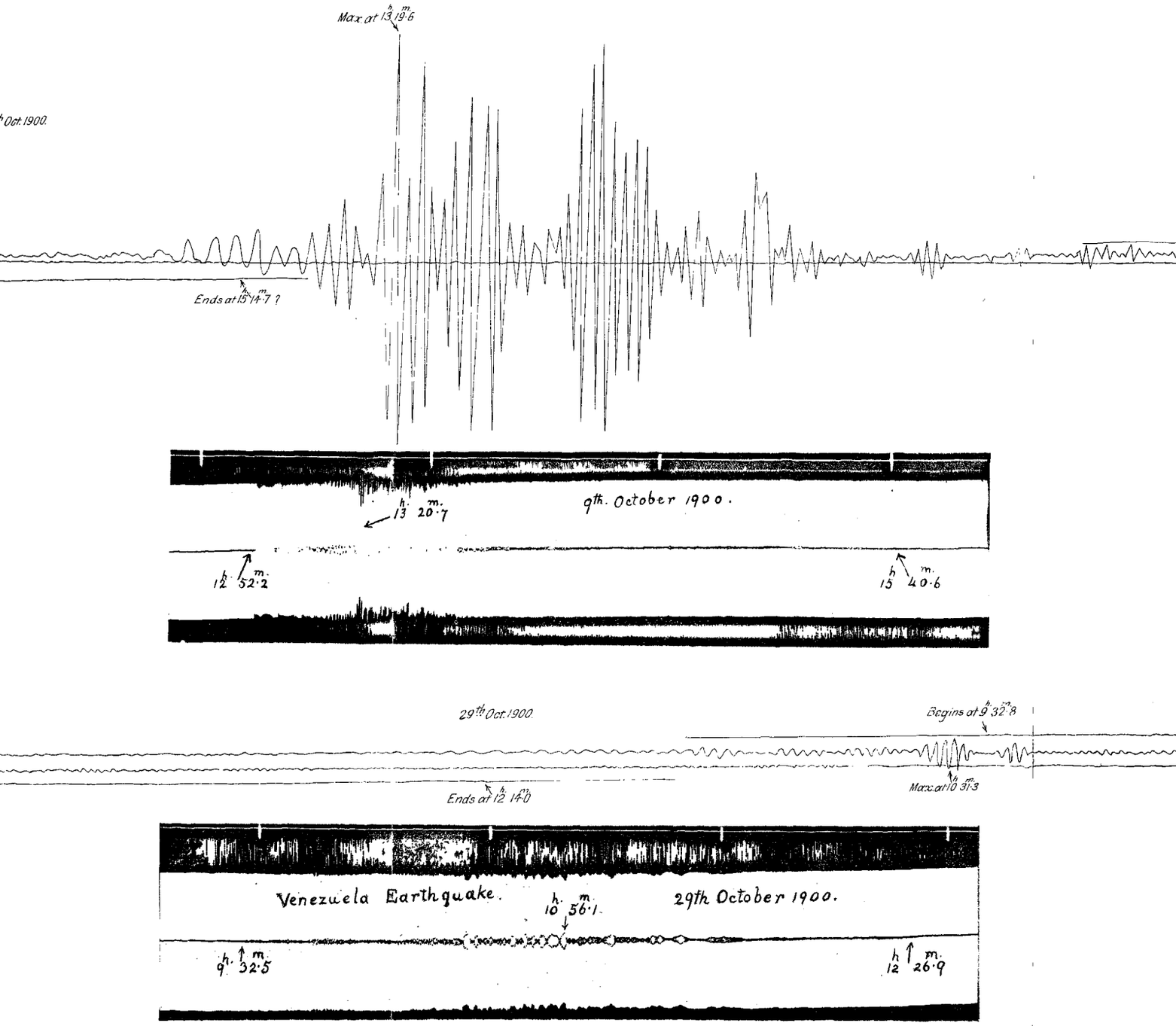
Observatory Number.	Date.	Time of Disturbance in G. M. T.			Amplitude or half the complete range of Maximum motion.	Remarks.
		Beginning.	Maximum.	End.		
		H. m.	H. m.	H. m.	Millimetres.	
1 ...	1900, October 29 ...	9 34·5	10 25·6	11 55·8	0·7	Sensibility 1 m. m. = 0″·21.
2 ...	„ November 5 ...	...	...	...	...	Movements very small and therefore difficult to locate the phases exactly.
3 ...	„ „ 12 ...	1 18·8	1 30·4	2 30·0	0·4	Sensibility 1 m. m. = 0″·15.
4 ...	„ „ 16 ...	...	...	...	...	Disturbance partially recorded; movements very small and therefore difficult to locate the phases exactly.
5 ...	„ „ 24 ...	8 7·1	8 40·5	9 20·5	0·6	Sensibility 1 m. m. = 0″·16.
6 ...	„ December 25 ...	5 15·0	5 41·7	6 18·8	1·7	„ „ = 0″·12.

1901.

1 ...	1901, January 7 ...	1 46·8	2 3·8	2 56·7	0·9	Sensibility 1 m. m. = 0″·15.
2 ...	„ February 15 ...	8 11·4	8 17·6	8 39·4	0·4	„ „ = 0″·12.
3 ...	„ April 5— 6 ...	23 45·3	0 13·8	1 49·0	3·0	„ „ = 0″·15.
4 ...	„ „ 6 ...	...	...	...	...	Movements very small and therefore difficult to locate the phases exactly.
5 ...	„ „ 27 ...	4 3·8	4 9·6	4 26·7	2·4	Sensibility 1 m. m. = 0″·19.
6 ...	„ May 7 ...	...	...	...	...	Movements very small and therefore difficult to locate the phases exactly.
7 ...	„ „ 25 ...	...	...	...	...	Do. do.
8 ...	„ June 13 ...	...	...	...	...	Do. do.
9 ...	„ „ 13 ...	...	...	...	...	Do. do.
10 ...	„ „ 24 ...	7 12·9	7 41·5	8 16·3?	0·7	Sensibility 1 m. m. = 0″·23.
11 ...	„ August 6 ...	10 11·2	10 12·4	10 15·0	0·3	„ „ = 0″·20.
12 ...	„ „ 6 ...	...	...	...	...	Movements very small and therefore difficult to locate the phases exactly.
13 ...	„ „ 9 ...	9 42·8	10 2·8	10 33·3?	0·8	Sensibility 1 m. m. = 0″·15.
14 ...	„ „ 9 ...	13 20·9	14 13·3	15 57·7?	0·8	„ „ = 0″·33.
15 ...	„ „ 9 ...	18 44·9	19 13·4	19 55·6	4·6	„ „ = 0″·20.
16 ...	„ September 7 ...	...	...	...	...	Movements very small and therefore difficult to locate the phases exactly.
17 ...	„ „ 10 ...	...	...	...	...	Do. do.
18 ...	„ „ 30 ...	...	...	...	...	Do. do.
19 ...	„ October 8 ...	...	...	...	...	Do. do.
20 ...	„ „ 17 ...	...	...	...	...	Do. do.
21 ...	„ November 8 ...	...	...	...	...	Do. do.
22 ...	„ „ 8 ...	...	...	...	...	Do. do.
23 ...	„ „ 15 ...	...	...	...	...	Do. do.
24 ...	„ „ 18 ...	0 18·2	0 23·9	0 48·2	0·9	Sensibility 1 m. m. = 0″·10.
25 ...	„ „ 25 ...	...	...	...	...	Movements very small and therefore difficult to locate the phases exactly.
26 ...	„ December 9 ...	...	...	...	...	Do. do.
27 ...	„ „ 14 ...	23 6·5	23 13·7	...	0·4	Disturbance partially recorded. Sensibility 1 m. m. = 0″·12.
28 ...	„ „ 26 ...	...	...	...	...	Movements very small and therefore difficult to locatet he phases exactly.
29 ...	„ „ 31 ...	9 26·1	9 58·0	11 7·1?	3·0	Sensibility 1 m. m. = 0″·07.

GOVERNMENT OBSERVATORY, BOMBAY.

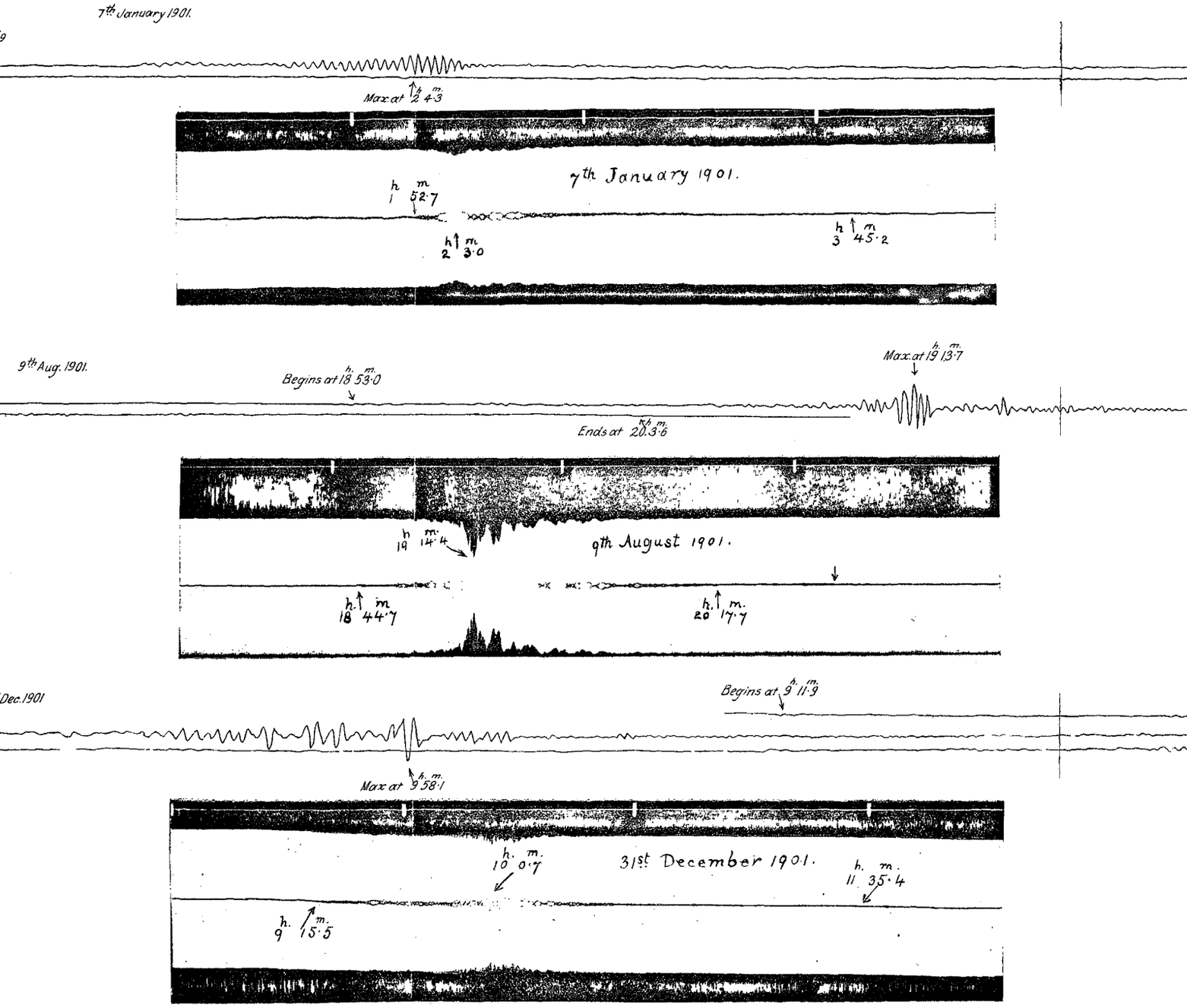
Principal Seismic Disturbances as recorded by the Colaba Seismograph and the Milne's Seismograph.



All Times mentioned above denote G.M.T.

GOVERNMENT OBSERVATORY, BOMBAY.

Principal Seismic Disturbances as recorded by the Colaba Seismograph and the Milne's Seismograph.


7th January 1901.
Max. at h 2 m 4·3
7th January 1901.
h m 1 52·7
h m 2 3·0
h m 3 45·2
9th Aug. 1901.
Begins at h. 18 m. 53·0
Max. at h. 19 m. 13·7
Ends at h. 20 m. 3·6
9th August 1901.
h m 19 14·4
h. m 18 44·7
h. m 20 17·7
Dec. 1901
Begins at h. 9 m. 11·9
Max at h. 9 m. 58·1
31st December 1901.
h. m. 10 0·7
h. m. 11 35·4
h. m. 9 15·5

All Times mentioned above denote G.M.T.

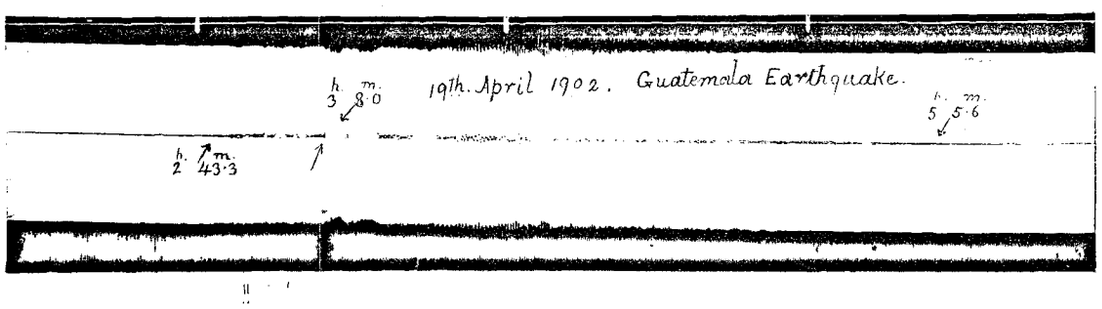
GOVERNMENT OBSERVATORY, BOMBAY.

Principal Seismic Disturbances as recorded by the Colaba Seismograph and the Milne's Seismograph.

April 1902.

Begins at h. 2 m. 43·9 Max. at h. 3 m. 48·3

ds at h. 4 m. 35·9

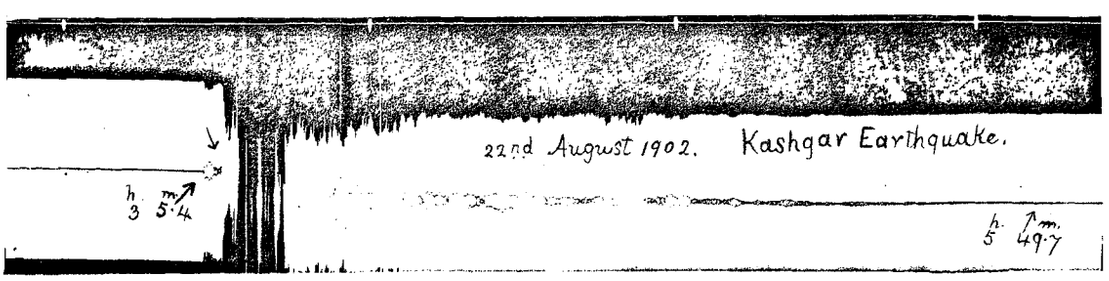


g. 190

Begins at h. 3 m. 5·1

Boom in violent Motion

Ends at h. 5 m. 34·1



All Times mentioned above denote G.M.T.

TABLES OF RESULTS

OF

ABSOLUTE MAGNETICAL OBSERVATIONS,

1900 AND 1901.

B 428—1

Absolute Magnetical Observations.—Table I.

Observations of Vibration and Deflection, taken with the Kew Unifilar Magnetometer (No. 23, by Elliott Brothers), for the determination of Absolute Horizontal Force.

1900.

1900. Date.	Civil Time, Mean.	Magnet N. 23 *a*. Time of one Vibration.	Effect of 90° Torsion.	Temperature.	Rate of Chronometer.	Corresponding Mean Reading of L. H. F. Magnetometer. Scale Reading.	Thermometer.	Angle of Deflection of Magnet N. 23 *c* by N. 23 *a* at Distance. 0·8 foot.	1·0 foot.	Temperature.	Corresponding Mean Reading of L. H. F. Magnetometer. Scale Reading.	Thermometer.	Observer.	Calculated Results in English Units. Values of m.	Values of X. From Deflections at distance. 0·8 foot ($X_{0·8}$)	1·0 foot ($X_{1·0}$)	Difference. $X_{0·8} - X_{1·0}$	Mean. $\frac{X_{0·8}+X_{1·0}}{2}$	Monthly Mean Values of X.	Monthly Mean Values of X in Metrical Units.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	h. m.	s.	Sc. div.	°	s.		°	° ′ ″	° ′ ″	°		°								
JANUARY 3	12 3	2·8535	0·78	81·2	+7·8	17·05	79·7	17 15 7	8 46 25	82·9	16·94	80·4	S.	·63012	8·1313	8·1294	+·0019	8·1303		
„ „	15 5	2·8551	0·78	82·8	„	16·33	82·2	17 15 15	8 46 25	84·1	16·55	81·7	S.	·63006	8·1264	8·1251	+·0013	8·1257		
„ 10	12 10	2·8527	0·83	80·7	+7·9	17·45	77·4	17 15 45	8 46 42	81·7	17·35	78·2	N.	·63035	8·1317	8·1300	+·0017	8·1308		
„ „	15 20	2·8539	0·83	82·4	„	16·80	79·9	17 16 51	8 47 12	81·9	16·94	79·5	N.	·63057	8·1255	8·1242	+·0013	8·1248		
„ 17	12 1	2·8526	0·87	78·7	+7·9	17·30	74·9	17 17 37	8 47 35	78·6	17·32	75·0	S.	·63058	8·1261	8·1247	+·0014	8·1254	8·1236	3·7456
„ „	15 1	2·8538	0·85	80·7	„	16·83	75·8	17 17 49	8 47 54	79·4	17·19	75·5	S.	·63077	8·1229	8·1199	+·0030	8·1214		
„ 24	12 6	2·8519	0·87	76·7	+7·7	17·97	72·7	17 19 27	8 48 21	76·9	17·80	73·5	N.	·63094	8·1210	8·1206	+·0004	8·1208		
„ „	15 22	2·8529	0·88	78·5	„	17·37	74·8	17 19 25	8 48 20	78·3	17·50	74·4	N.	·63097	8·1184	8·1182	+·0002	8·1183		
„ 31	12 2	2·8530	0·89	79·2	+7·4	17·23	77·2	17 18 38	8 48 1	79·9	17·16	77·6	S.	·63086	8·1203	8·1195	+·0008	8·1199		
„ „	15 5	2·8539	0·88	82·4	„	16·52	78·2	17 18 53	8 48 6	81·0	16·75	78·1	S.	·63112	8·1186	8·1180	+·0006	8·1183		
FEBRUARY 7	12 4	2·8538	0·87	82·7	+8·7	16·92	78·6	17 17 42	8 47 20	83·5	16·79	79·5	N.	·63086	8·1214	8·1221	−·0007	8·1217		
„ „	15 21	2·8555	0·83	84·3	„	16·41	79·9	17 17 33	8 47 25	83·8	16·48	80·7	N.	·63070	8·1182	8·1180	+·0002	8·1181		
„ 14	12 28	2·8529	0·80	78·9	+8·7	17·77	76·7	17 17 57	8 47 40	79·1	17·48	77·5	D.	·63054	8·1238	8·1231	+·0007	8·1234		
„ „	15 52	2·8547	0·76	80·9	„	16·69	79·2	17 18 12	8 47 52	80·9	16·88	78·6	D.	·63064	8·1178	8·1165	+·0013	8·1171	8·1209	3·7444
„ 21	12 12	2·8536	0·78	82·2	+9·9	17·03	78·7	17 17 14	8 47 20	82·2	16·86	79·6	N.	·63071	8·1247	8·1238	+·0009	8·1242		
„ „	15 17	2·8555	0·81	84·5	„	16·21	81·3	17 16 53	8 47 9	83·4	16·50	80·9	N.	·63055	8·1216	8·1206	+·0010	8·1211		
„ 28	12 41	2·8542	0·79	83·3	+9·4	16·90	79·9	17 17 10	8 47 25	83·7	16·68	80·6	D.	·63072	8·1227	8·1210	+·0017	8·1218		
„ „	16 2	2·8549	0·82	83·5	„	16·09	81·8	17 17 5	8 47 20	84·2	16·22	81·8	D.	·63070	8·1208	8·1193	+·0015	8·1200		
MARCH 7	11 55	2·8538	0·81	82·9	+9·9	16·93	79·8	17 16 32	8 46 56	83·0	16·72	80·7	S.	·63052	8·1266	8·1262	+·0004	8·1264		
„ „	15 32	2·8549	0·85	84·0	„	15·97	82·3	17 16 35	8 46 58	83·7	16·24	82·0	S.	·63057	8·1236	8·1231	+·0005	8·1233		
„ 14	13 1	2·8568	0·80	86·4	+11·4	15·15	85·3	17 17 49	8 47 32	87·3	14·95	85·9	D.	·63075	8·1122	8·1120	+·0002	8·1121		
„ „	15 37	2·8570	0·73	88·7	„	14·53	86·5	17 17 42	8 47 37	87·7	14·69	86·4	D.	·63104	8·1141	8·1128	+·0013	8·1134	8·1225	3·7451
„ 21	12 18	2·8537	0·67	83·6	+10·2	16·64	81·8	17 16 27	8 46 55	83·5	16·47	82·4	N.	·63062	8·1276	8·1270	+·0006	8·1273		
„ „	15 15	2·8546	0·61	84·2	„	15·92	82·9	17 16 20	8 46 47	84·1	16·12	82·9	N.	·63058	8·1255	8·1253	+·0002	8·1254		
„ 28	12 14	2·8540	0·69	86·3	+9·3	16·64	83·5	17 16 0	8 46 40	86·3	16·42	84·1	D.	·63077	8·1281	8·1277	+·0004	8·1279		
„ „	15 24	2·8548	0·72	84·8	„	15·82	83·9	17 16 12	8 46 44	85·8	16·00	84·1	D.	·63065	8·1242	8·1238	+·0004	8·1240		

1900. Date.	Civil Time, Mean.	Magnet N. 23 *a*. Time of one Vibration.	Effect of 90° Torsion.	Temperature.	Rate of Chronometer.	Corresponding Mean Reading of L. H. F. Magnetometer. Scale Reading.	Thermometer.	Angle of Deflection of Magnet N. 23 *c* by N. 23 *a* at Distance. 0·8 foot.	1·0 foot.	Temperature.	Corresponding Mean Reading of L. H. F. Magnetometer. Scale Reading.	Thermometer.	Observer.	Calculated Results in English Units. Values of m.	Values of X. From Deflections at distance. 0·8 foot ($X_{0·8}$),	1·0 foot ($X_{1·0}$)	Difference. $X_{0·8}-X_{1·0}$	Mean. $\frac{X_{0·8}+X_{1·0}}{2}$	Monthly Mean Values of X.	Monthly Mean Values of X in Metrical Units.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	h. m.	s.	Sc. div.	°	s.		°	° ′ ″	° ′ ″	°		°								
April 4	12 4	2·8545	0·63	84·9	+13·0	16·62	82·2	17 15 59	8 46 37	84·9	16·43	83·0	N.	·63051	8·1272	8·1272	·0000	8·1272		
„ „	15 38	2·8560	0·65	86·7	„	15·81	84·0	17 16 30	8 47 3	84·8	15·92	83·9	N.	·63058	8·1225	8·1210	+·0015	8·1217		
„ 11	12 37	2·8559	0·73	87·0	+10·6	15·82	84·5	17 15 12	8 46 22	88·1	15·69	85·1	S.	·63036	8·1249	8·1236	+·0013	8·1242		
„ „	15 47	2·8563	0·75	86·7	„	15·20	85·8	17 15 14	8 46 15	88·4	15·46	85·6	S.	·63038	8·1231	8·1229	+·0002	8·1230		
„ 18	12 28	2·8561	0·59	87·3	+8·5	15·92	85·6	17 15 27	8 46 20	87·9	15·81	86·2	N.	·63038	8·1236	8·1236	·0000	8·1236	8·1243	3·7460
„ „	15 23	2·8566	0·60	88·2	„	15·13	87·1	17 15 38	8 46 22	88·0	15·42	86·7	N.	·63048	8·1223	8·1227	−·0004	8·1225		
„ 25	12 12	2·8566	0·62	89·1	+12·7	15·55	86·3	17 14 17	8 45 50	90·0	15·48	86·6	S	·63022	8·1266	8·1261	+·0005	8·1263		
„ „	15 16	2·8569	0·63	90·3	„	15·11	87·5	17 14 22	8 45 51	90·8	15·27	87·2	S.	·63038	8·1259	8·1255	+·0004	8·1257		
May 2	12 6	2·8570	0·67	88·8	+13·1	15·16	88·1	17 16 0	8 46 42	90·3	15·17	88·5	N.	·63070	8·1184	8·1176	+·0008	8·1180		
„ „	15 12	2·8580	0·63	91·8	„	14·69	89·6	17 15 46	8 46 35	91·6	14·91	89·5	N.	·63077	8·1178	8·1173	+·0005	8·1175		
„ 9	12 11	2·8565	0·65	88·9	+13·8	15·62	86·9	17 15 37	8 46 27	89·2	15·42	87·4	S.	·63052	8·1225	8·1223	+·0002	8·1224		
„ „	15 4	2·8581	0·62	90·1	„	15·00	88·3	17 15 30	8 46 32	89·8	15·09	88·1	S.	·63038	8·1190	8·1176	+·0014	8·1183		
„ 16	12 13	2·8566	0·68	88·2	+10·1	15·39	87·7	17 16 6	8 46 45	88·5	15·22	88·3	N.	·63054	8·1201	8·1193	+·0008	8·1197		
„ „	15 19	2·8576	0·68	88·5	„	14·79	89·1	17 15 52	8 46 37	89·7	14·95	89·1	N.	·63048	8·1173	8·1167	+·0006	8·1170	8·1194	3·7437
„ 23	11 50	2·8564	0·67	90·5	+11·1	15·71	87·7	17 14 57	8 46 12	91·2	15·57	88·2	S.	·63062	8·1246	8·1236	+·0010	8·1241		
„ „	15 5	2·8569	0·68	91·5	„	15·06	89·4	17 15 23	8 46 31	92·1	15·26	89·0	S.	·63091	8·1216	8·1199	+·0017	8·1207		
„ 30	12 20	2·8566	0·69	88·6	+11·8	15·40	88·2	17 15 40	8 46 25	89·1	15·27	88·8	N.	·63048	8·1216	8·1218	−·0002	8·1217		
„ „	15 36	2·8583	0·65	89·9	„	14·54	89·6	17 16 9	8 46 45	90·1	14·71	89·5	N.	·63054	8·1152	8·1147	+·0005	8·1149		
June 6	12 12	2·8569	0·68	92·9	+11·1	15·48	89·9	17 13 15	8 45 25	93·9	15·28	90·5	S.	·63036	8·1292	8·1277	+·0015	8·1284		
„ „	15 16	2·8593	0·67	93·8	„	14·70	91·4	17 13 17	8 45 20	95·3	14·91	91·0	S.	·63010	8·1216	8·1210	+·0006	8·1213		
„ 13	12 48	2·8567	0·72	91·2	+10·5	15·46	90·0	17 14 26	8 45 55	92·4	15·27	90·4	N.	·63048	8·1251	8·1244	+·0007	8·1247		
„ „	15 22	2·8577	0·69	91·6	„	14·86	91·2	17 14 37	8 45 55	92·5	15·02	90·8	N.	·63043	8·1218	8·1218	·0000	8·1218	8·1247	3·7461
„ 20	12 17	2·8571	0·69	91·4	+8·6	15·38	90·5	17 13 42	8 45 35	92·0	15·26	91·0	S.	·63019	8·1268	8·1261	+·0007	8·1264		
„ „	15 18	2·8581	0·67	92·8	„	14·64	91·6	17 14 2	8 45 40	93·0	14·90	91·4	S.	·63035	8·1233	8·1229	+·0004	8·1231		
„ 27	12 11	2·8544	0·60	84·8	+9·7	16·22	83·9	17 16 10	8 46 45	84·9	16·13	84·3	N.	·63059	8·1266	8·1261	+·0005	8·1263		
„ „	15 25	2·8551	0·59	85·0	„	15·81	84·9	17 15 35	8 46 19	86·9	16·03	84·7	N.	·63049	8·1251	8·1257	−·0006	8·1254		
July 4	12 10	2·8563	0·60	88·6	+7·1	15·92	86·3	17 14 47	8 45 55	89·4	15·78	86·8	S.	·63026	8·1253	8·1259	−·0006	8·1256		
„ „	15 6	2·8565	0·58	88·6	„	15·34	87·2	17 15 52	8 46 22	89·3	15·53	87·1	S.	·63062	8·1208	8·1221	−·0013	8·1214		
„ 11	12 17	2·8555	0·53	87·1	+4·3	15·69	85·5	17 15 52	8 46 37	87·0	15·72	85·6	N.	·63058	8·1242	8·1236	+·0006	8·1239		
„ „	15 25	2·8560	0·56	86·6	„	15·40	86·0	17 15 49	8 46 33	87·5	15·53	86·0	N.	·63048	8·1219	8·1216	+·0003	8·1217	8·1226	3·7452
„ 18	12 5	2·8558	0·53	87·7	+5·3	15·88	85·6	17 15 32	8 46 25	87·8	15·73	85·9	S.	·63042	8·1244	8·1240	+·0004	8·1242		
„ „	15 10	2·8567	0·56	86·8	„	14·96	86·7	17 15 5	8 46 7	88·3	15·30	86·5	S.	·63025	8·1223	8·1227	−·0004	8·1225		
„ 25	12 14	2·8567	0·55	88·1	+8·1	15·57	85·8	17 15 33	8 46 27	88·2	15·64	86·0	N.	·63042	8·1221	8·1218	+·0003	8·1219		
„ „	15 37	2·8568	0·59	87·1	„	15·11	86·8	17 15 28	8 46 25	89·6	15·45	87·4	N.	·63057	8·1199	8·1193	+·0006	8·1196		

August 1	12	18	2·8555	0·56	81·5	+6·6	16·11	80·9	17	16	12	8	46	50	82·1	16·04	80·9	S.	·62991	8·1229	8·1218	+·0011	8·1223		
„ „	15	13	2·8558	0·56	81·6	„	15·86	80·	17	16	15	8	47	0	81·9	16·02	80·9	S.	·63000	8·1219	8·1199	+·0020	8·1209		
„ 8	12	15	2·8555	0·48	84·8	+4·2	15·84	83·4	17	16	37	8	46	57	84·7	15·63	83·6	N.	·63036	8·1216	8·1214	+·0002	8·1215		
„ „	15	29	2·8569	0·51	84·0	„	15·02	83·9	17	17	28	8	47	21	84·7	15·14	84·0	N.	·63039	8·1137	8·1135	+·0002	8·1136		
„ 15	12	14	2·8545	0·55	83·1	+0·6	16·50	81·4	17	16	20	8	46	55	83·3	16·50	81·4	S.	·63036	8·1247	8·1236	+·0011	8·1241	8·1228	3·7453
„ „	15	4	2·8556	0·50	83·3	„	16·02	81·9	17	16	25	8	46	56	83·4	16·34	81·7	S.	·63030	8·1216	8·1206	+·0010	8·1211		
„ 22	12	12	2·8543	0·50	85·7	+3·3	16·05	84·2	17	15	20	8	46	22	85·5	15·90	84·6	N.	·63042	8·1298	8·1291	+·0007	8·1294		
„ „	15	17	2·8557	0·52	86·4	„	15·48	85·0	17	15	20	8	46	25	86·3	15·67	85·0	N.	·63036	8·1257	8·1246	+·0011	8·1251		
„ 30	12	21	2·8550	0·52	86·7	+6·5	15·80	84·0	17	15	50	8	46	32	86·1	15·65	84·6	S.	·63052	8·1264	8·1262	+·0002	8·1263		
„ „	15	17	2·8559	0·52	88·0	„	15·27	85·0	17	16	5	8	46	41	86·7	15·42	85·0	S.	·63065	8·1234	8·1233	+·0001	8·1233		
Sept. 5	12	26	2·8544	0·52	85·6	+5·3	15·91	83·8	17	15	54	8	46	35	86·2	15·70	84·1	N.	·63057	8·1268	8·1266	+·0002	8·1267		
„ „	15	37	2·8564	0·54	86·6	„	15·19	85·0	17	15	55	8	46	28	86·6	15·42	84·8	N.	·63035	8·1214	8·1221	−·0007	8·1217		
„ 12	13	9	2·8552	0·57	87·1	+5·2	15·71	84·8	17	15	0	8	46	5	87·9	15·60	85·1	S.	·63036	8·1274	8·1276	−·0002	8·1275		
„ „	15	20	2·8565	0·50	87·8	„	15·27	85·3	17	15	12	8	46	20	88·4	15·50	85·3	S.	·63042	8·1234	8·1225	+·0009	8·1229		
„ 19	12	5	2·8550	0·54	86·2	+6·8	15·74	84·9	17	14	46	8	46	10	86·2	15·57	85·4	N.	·63023	8·1296	8·1283	+·0013	8·1289	8·1256	3·7466
„ „	15	27	2·8552	0·56	83·7	„	15·15	85·1	17	15	45	8	46	22	85·1	15·28	85·7	N.	·63027	8·1244	8·1253	−·0009	8·1248		
„ 26	12	4	2·8546	0·53	83·0	+3·3	16·08	82·7	17	15	30	8	46	17	83·7	16·03	82·7	S.	·63006	8·1276	8·1281	−·0005	8·1278		
„ „	15	12	2·8555	0·51	85·5	„	15·72	83·1	17	15	45	8	46	37	84·8	15·87	83·0	S.	·63033	8·1253	8·1242	+·0011	8·1247		
Oct. 4	12	16	2·8544	0·55	87·7	+1·0	16·18	84·6	17	14	5	8	45	41	86·8	16·00	84·9	N.	·63019	8·1345	8·1341	+·0004	8·1343		
„ „	15	18	2·8562	0·60	88·2	„	15·42	85·9	17	14	36	8	46	1	87·4	15·62	85·6	N.	·63017	8·1272	8·1262	+·0010	8·1267		
„ 10	12	9	2·8555	0·65	88·0	+1·2	15·86	84·5	17	14	22	8	45	41	87·6	15·68	84·9	N.	·63006	8·1296	8·1304	−·0008	8·1300		
„ „	15	16	2·8564	0·58	88·3	„	15·14	85·8	17	14	45	8	46	3	88·3	15·30	85·6	S.	·63022	8·1253	8·1247	+·0006	8·1250		
„ 17	12	7	2·8550	0·62	87·8	+1·7	16·07	84·2	17	15	10	8	46	12	87·4	15·96	85·1	N.	·63048	8·1279	8·1279	·0000	8·1279	8·1237	3·7457
„ „	15	30	2·8565	0·71	87·7	„	15·31	86·2	17	15	22	8	46	17	88·5	15·45	86·0	N.	·63032	8·1219	8·1219	·0000	8·1219		
„ 25	12	2	2·8567	0·80	88·1	+2·0	15·36	84·9	17	16	41	8	47	5	87·9	14·90	86·0	S.	·63048	8·1171	8·1160	+·0011	8·1165		
„ „	16	20	2·8582	0·81	88·6	„	14·24	88·0	17	16	47	8	47	5	90·2	14·23	87·9	S.	·63049	8·1107	8·1102	+·0005	8·1104		
„ 31	11	58	2·8561	0·80	89·9	+3·6	15·61	86·0	17	14	41	8	46	2	89·4	15·48	86·1	N.	·63033	8·1266	8·1261	+·0005	8·1263		
„ „	15	9	2·8571	0·77	88·4	„	14·68	88·3	17	15	47	8	46	30	89·3	14·91	87·6	N.	·63041	8·1184	8·1184	·0000	8·1184		
Nov. 7	12	6	2·8559	0·80	88·0	+3·4	16·00	84·2	17	14	35	8	46	2	88·7	15·87	84·8	S.	·63022	8·1266	8·1257	+·0009	8·1261		
„ „	15	15	2·8567	0·75	88·6	„	15·33	87·1	17	14	47	8	46	17	89·6	15·43	86·6	S.	·63029	8·1234	8·1212	+·0022	8·1223		
„ 14	12	18	2·8556	0·78	85·5	+3·9	15·95	84·1	17	15	45	8	46	32	86·0	15·73	84·6	N.	·63020	8·1234	8·1231	+·0003	8·1232		
„ „	15	31	2·8557	0·82	85·0	„	15·60	84·9	17	15	50	8	46	35	85·8	15·61	84·7	N.	·63022	8·1225	8·1221	+·0004	8·1223	8·1254	3·7465
„ 21	12	0	2·8557	0·76	89·1	+3·2	16·35	84·8	17	13	21	8	45	17	89·0	16·22	85·2	S.	·62994	8·1326	8·1326	·0000	8·1326		
„ „	15	5	2·8563	0·76	89·5	„	15·45	87·1	17	14	10	8	45	47	89·5	15·80	86·0	S.	·63026	8·1276	8·1270	+·0006	8·1273		
„ 28	12	10	2·8556	0·89	88·4	+4·5	16·02	85·7	17	14	57	8	46	7	87·6	15·86	86·1	N.	·63027	8·1272	8·1270	+·0002	8·1271		
„ „	15	35	2·8566	0·88	88·0	„	15·44	87·2	17	15	10	8	46	20	87·8	15·57	86·9	N.	·63023	8·1231	8·1219	+·0012	8·1225		
Dec. 5	12	14	2·8563	0·82	87·8	+3·7	15·95	84·3	17	15	25	8	46	28	87·9	15·86	85·0	S.	·63035	8·1227	8·1216	+·0011	8·1221		
„ „	15	15	2·8571	0·83	87·6	„	15·52	86·0	17	15	27	8	46	27	89·1	15·65	85·8	S.	·63026	8·1191	8·1182	+·0009	8·1186		
„ 12	12	43	2·8565	0·80	88·9	+3·6	16·02	84·4	17	15	12	8	46	11	89·2	15·92	84·9	N.	·63033	8·1229	8·1231	−·0002	8·1230		
„ „	15	10	2·8566	0·82	87·8	„	15·68	86·5	17	15	32	8	46	30	89·1	15·77	85·7	N.	·63035	8·1204	8·1193	+·0011	8·1198	8·1214	3·7446
„ 19	12	7	2·8556	0·80	88·1	+4·8	16·51	84·0	17	14	0	8	45	50	88·7	16·21	85·0	S.	·63010	8·1298	8·1281	+·0017	8·1289		
„ „	15	17	2·8566	0·73	87·0	„	15·84	85·7	17	14	5	8	45	57	88·9	15·95	85·6	S.	·63000	8·1259	8·1236	+·0023	8·1247		
„ 26	12	38	2·8553	0·63	82·9	+3·3	16·73	80·1	17	17	22	8	47	25	83·0	16·64	81·0	G. S. J.	·63049	8·1190	8·1180	+·0010	8·1185		
„ „	15	46	2·8556	0·64	81·3	„	16·25	82·4	17	17	29	8	47	29	83·1	16·44	82·1	G. S. J.	·63041	8·1161	8·1150	+·0011	8·1155		
The mean value of the Horizontal Force for the year 1900 =																							8·1231		3·7454

Absolute Magnetical Observations.—Table II.

Observations of Absolute Declination.

1900.

1900. Date.	Bombay Civil Time.	Mean Readings. Collimator Magnet. Scale apparently Erect.	Mean Readings. Collimator Magnet. Scale apparently Inverted.	Mean Readings. Horizontal Circle with Telescope pointed to Scale of Collimator Magnet.	Mean Readings. Horizontal Circle with Telescope pointed to Tárdeo Chimney.	Torsion. Mean.	Torsion. Effect of 90.°	Observer.	Corresponding Reading of Declination Magnetograph.	Absolute Easterly Declination corrected for Torsion.	Monthly Mean. Corresponding Reading of Declination Magnetograph.	Monthly Mean. Absolute Easterly Declination.
1	2	3	4	5	6	7	8	9	10	11	12	13
	h. m.	Sc. div.	Sc. div.	° ′ ″	° ′ ″	°	Sc. div.		Sc. div.	° ′ ″	Sc. div.	° ′ ″
JAN. 4	11 31	+1·59	+1·27	16 51 10	196 53 50	15 E	0·88	D.	18·29	0 23 48		
,, 11	11 42	+1·59	+1·40	16 52 35	196 54 20	0		N.	18·52	0 24 53	18·50	0 25 1
,, 18	11 11	+1·51	+1·57	16 52 0	196 53 15	0		S	18·50	0 25 7		
,, 25	11 35	+1·54	+1·49	16 52 35	196 53 10	17W	0·80	N.	18·70	0 26 15		
FEB. 1	11 27	+1·52	+1·40	16 52 50	196 52 50	0		S.	18·69	0 26 34		
,, 8	11 28	+1·55	+1·46	16 52 10	196 53 0	10 E	0·76	N.	18·60	0 25 30	18·59	0 25 37
,, 15	11 45	+1·55	+1·46	16 52 15	196 52 50	12 E	0·76	D.	18·58	0 25 43		
,, 22	11 31	+1·52	+1·46	16 50 40	196 52 45	15 W	0·74	N.	18·50	0 24 42		
MARCH. 1	11 27	+1·44	+1·44	16 49 50	196 51 55	0		D.	18·49	0 24 21		
,, 8	11 51	+1·52	+1·61	16 50 40	196 52 10	10 W	0·75	N.	18·52	0 25 1		
,, 16	11 51	+1·59	+1·47	16 48 50	196 51 15	0		D.	18·45	0 24 9	18·44	0 23 55
,, 22	11 43	+1·60	+1·42	16 50 20	196 53 15	0		N.	18·47	0 23 43		
,, 29	11 50	+1·52	+1·61	16 48 20	196 52 20	0		D.	18·27	0 22 20		
APRIL. 6	11 58	+1·57	+1·45	16 50 45	196 54 25	0		N.	18·39	0 22 54		
,, 12	11 46	+1·52	+1·40	16 51 40	196 55 0	0		S.	18·39	0 23 14		
,, 19	12 19	+1·49	+1·56	16 52 55	196 55 40	22 E	0·63	N.	18·39	0 23 16	18·38	0 23 10
,, 26	12 2	+1·52	+1·41	16 52 30	196 55 47	0		S.	18·34	0 23 16		
MAY. 3	11 36	+1·55	+1·49	16 52 30	196 55 30	0		N.	18·40	0 23 30		
,, 10	11 32	+1·56	+1·39	16 51 40	196 54 50	0		S.	18·37	0 23 27		
,, 17	11 33	+1·55	+1·42	16 50 30	196 54 40	0		N.	18·30	0 22 24	18·35	0 23 9
,, 25	11 13	+1·52	+1·34	16 51 30	196 54 25	15 E	0·88	S.	18·35	0 23 23		
,, 31	12 0	+1·52	+1·45	16 50 50	196 54 20	0		N.	18·35	0 23 0		
JUNE. 7	11 12	+1·52	+1·36	16 50 52	196 53 55	0		S.	18·39	0 23 34		
,, 14	11 55	+1·59	+1·39	16 49 40	196 54 20	0		N.	18·28	0 22 0	18·38	0 23 15
,, 21	11 21	+1·54	+1·39	16 51 10	196 54 30	0		S.	18·40	0 23 16		
,, 28	12 3	+1·55	+1·50	16 51 40	196 54 0	0		N.	18·45	0 24 9		
JULY. 5	12 10	+1·57	+1·49	16 52 37	196 54 35	0		S.	18·51	0 24 34		
,, 12	11 41	+1·55	+1·52	16 49 50	196 54 17	22 E	0·51	N.	18·18	0 21 43	18·32	0 22 52
,, 19	11 46	+1·55	+1·41	16 51 10	196 55 0	0		S.	18·28	0 22 46		
,, 26	12 8	+1·57	+1·40	16 50 50	196 54 45	20 E	0·52	N.	18·30	0 22 26		
AUG. 2	11 50	+1·57	+1·50	16 51 15	196 54 55	0		S.	18·30	0 22 50		
,, 9	12 7	+1·55	+1·49	16 50 10	196 54 35	0		N.	18·25	0 22 5		
,, 16	11 41	+1·57	+1·47	16 50 0	196 54 20	0		S.	18·20	0 22 13	18·20	0 22 0
,, 23	11 46	+1·55	+1·50	16 49 40	196 54 55	0		N.	18·10	0 21 14		
,, 31	11 30	+1·52	+1·47	16 50 0	196 54 50	0		S.	18·13	0 21 39		
SEPT. 6	12 2	+1·55	+1·47	16 48 40	196 54 50	15 E	0·55	N.	18·04	0 20 9		
,, 13	11 31	+1·56	+1·49	16 48 25	196 54 50	0		S.	18·00	0 20 5	18·03	0 20 20
,, 20	11 54	+1·52	+1·45	16 47 40	196 54 40	15 W	0·49	N.	17·95	0 19 41		
,, 27	11 26	+1·54	+1·49	16 49 35	196 54 40	0		S.	18·12	0 21 24		
OCT. 5	11 49	+1·60	+1·47	16 50 10	196 54 52	20 E	0·55	N.	18·15	0 21 35		
,, 11	11 23	+1·55	+1·42	16 51 10	196 54 40	20 E	0·58	S.	18·30	0 22 46		
,, 18	11 45	+1·57	+1·37	16 50 30	196 54 25	0		N.	18·27	0 22 45	18·25	0 22 31
,, 26	11 19	+1·55	+1·51	16 50 50	196 54 20	0		S.	18·29	0 22 59		
NOV. 1	11 41	+1·59	+1·49	16 51 30	196 54 20	0		N.	18·37	0 23 43		
,, 8	11 28	+1·57	+1·42	16 50 40	196 54 40	0			18·27	0 22 36		
,, 15	11 51	+1·60	+1·50	16 50 0	196 55 0	0		N.	18·15	0 21 33	18·26	0 22 33
,, 22	11 17	+1·55	+1·37	16 50 0	196 54 32	0		S.	18·20	0 22 6		
,, 29	11 54	+1·55	+1·40	16 51 0	196 54 50	0		N.	18·32	0 22 46		
DEC. 6	11 38	+1·52	+1·39	16 49 40	196 53 40	0		S.	18·29	0 22 34		
,, 13	11 56	+1·55	+1·44	16 49 30	196 53 30	0		N.	18·30	0 22 33	18·31	0 22 44
,, 20	11 31	+1·54	+1·41	16 50 0	196 53 50	0		S.	18·29	0 22 44		
,, 27	11 43	+1·56	+1·36	16 50 20	196 53 55	0		S. B. B.	18·36	0 23 5		

The Mean Declination for the year 1900 = 0°, 23′ 6″

Absolute Magnetical Observations.—Table III.

OBSERVATIONS OF INCLINATION, 1900.

Taken with Barrow's Dip Circle, with Microscopes, No. 49, and two 3½-inch Needles, Nos. 1 and 2, by Dover, Charlton.

1900. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
JAN. 2	11 34	13 2	S.	1	21 52·4	21 4·9	21 26·7	20 45·5	21 17·4	No. 1	
„ 5	14 32	16 0	D.	2	21 50·9	20 59·6	21 44·7	20 40·5	21 18·9	21 18·9	
„ 9	12 4	13 34	N.	2	21 45·9	21 0·6	21 41·9	20 39·2	21 16·9		
„ 12	14 22	15 46	N.	1	21 59·5	21 2·7	21 35·5	20 37·5	21 18·8		
„ 16	11 43	13 6	S.	1	21 58·4	21 4·6	21 28·6	20 43·6	21 18·8		21 18·5
„ 19	14 24	15 46	S.	2	21 54·5	20 56·1	21 44·2	20 39·2	21 18·5	No. 2	
„ 23	12 25	13 52	N.	2	21 58·0	20 52·2	21 45·7	20 37·1	21 18·2	21 18·1	
„ 26	14 34	15 58	N.	1	22 0·6	21 3·0	21 39·1	20 37·4	21 20·0		
„ 30	11 49	13 17	S.	1	21 59·0	21 7·6	21 35·7	20 35·2	21 19·4		
FEB. 2	14 24	15 52	S.	2	21 53·4	20 58·7	21 45·1	20 41·7	21 19·7	No. 1	
„ 6	12 8	13 48	N.	2	22 6·1	20 55·2	21 44·9	20 36·9	21 20·8	21 19·1	
„ 9	14 34	16 0	N.	1	22 7·9	20 57·6	21 56·7	20 13·1	21 18·8		
„ 13	12 13	13 41	D.	1	21 46·1	21 24·9	21 49·4	20 18·1	21 19·6		21 20·1
„ 16	15 14	16 48	D.	2	22 26·5	21 26·5	21 21·2	20 23·5	21 24·4	No. 2	
„ 20	11 55	13 25	N.	2	21 47·5	21 2·4	21 35·2	20 52·1	21 19·3	21 21·0	
„ 23	14 25	16 20	N.	1	22 20·2	20 50·4	21 34·2	20 36·0	21 20·2		
„ 26	12 15	13 46	D.	1	22 10·2	20 44·4	21 35·9	20 40·5	21 17·7		
MAR. 2	14 36	16 12	D.	2	21 45·9	21 7·0	21 32·1	21 2·6	21 21·9	No. 1	
„ 6	12 10	13 45	N.	2	21 44·9	21 1·2	21 38·4	20 45·9	21 17·6	21 20·9	
„ 9	14 27	15 52	N.	1	22 6·9	21 1·0	21 37·2	20 34·2	21 19·8		
„ 13	12 0	13 28	D.	1	22 7·7	21 7·1	21 38·9	20 34·6	21 22·1		
„ 16	15 7	16 36	D.	2	21 47·5	21 2·2	21 43·5	20 50·3	21 20·9		21 20·6
„ 20	12 10	13 40	N.	2	21 27·7	21 18·5	21 52·1	20 39·9	21 19·5	No. 2	
„ 23	14 40	16 10	N.	1	22 1·7	21 4·6	21 33·4	20 50·2	21 22·5	21 20·3	
„ 27	11 55	13 23	D.	1	21 59·4	21 6·7	21 26·9	20 44·6	21 19·4		
„ 30	14 48	16 15	D.	2	21 24·9	21 21·6	21 57·9	20 42·2	21 21·6		
APRIL 3	12 16	13 45	N.	2	21 37·5	21 22·4	21 29·5	20 48·6	21 19·5	No. 1	
„ 6	14 44	16 9	N.	1	21 39·5	21 18·9	21 18·4	20 57·7	21 18·6	21 19·7	
„ 10	11 51	13 19	S.	1	21 40·6	21 24·0	21 12·1	20 59·2	21 19·0		
„ 13	14 20	15 47	S.	2	21 31·1	21 16·7	21 15·0	21 19·9	21 20·7		21 20·1
„ 17	11 56	13 20	S.	2	21 34·4	21 13·0	21 17·5	21 16·2	21 20·3		
„ 20	14 21	15 55	S.	1	21 36·9	21 31·7	21 4·6	21 8·1	21 20·3	No. 2	
„ 24	11 52	13 34	S.	1	21 35·2	21 21·4	21 26·0	21 1·6	21 21·0	21 20·5	
„ 27	14 21	15 46	S.	2	21 44·0	21 16·0	21 22·7	21 3·2	21 21·5		

1900. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
MAY 1	12 12	13 41	N.	2	21 29·0	21 22·1	21 16·5	21 11·0	21 19·6	No. 1	
„ 4	14 37	15 59	N.	1	21 40·4	21 29·6	21 14·7	21 6·6	21 22·8	21 22·2	
„ 8	11 34	12 56	S.	1	21 40·1	21 32·5	21 15·6	20 2·2	21 22·6		
„ 11	14 22	15 46	S.	2	21 40·5	21 21·4	22 22·0	21 4·4	21 22·1		
„ 15	12 3	13 28	N.	2	21 31·5	21 24·2	21 17·2	21 4·6	21 19·4		21 21·1
„ 18	14 11	15 40	N.	1	21 38·0	21 30·0	21 16·5	21 6·7	21 22·8	No. 2	
„ 22	11 39	13 4	S.	1	21 38·4	21 26·2	21 16·5	21 1·9	21 20·7	21 20·2	
„ 25	14 20	15 44	S.	2	21 38·7	21 21·9	21 21·0	21 3·4	21 21·2		
„ 29	12 3	13 27	N.	2	21 31·0	21 20·1	21 17·2	21 7·0	21 18·8		
JUNE 1	14 29	15 55	N.	1	21 42·0	21 29·4	21 13·7	21 2·4	21 21·9	No. 1	
„ 5	11 44	13 10	S.	1	21 41·4	21 27·9	21 16·0	20 54·9	21 20·0	21 20·7	
„ 8	14 25	15 52	S.	2	21 33·0	21 22·1	21 22·5	21 3·1	21 20·2		
„ 12	11 51	13 19	N.	2	21 31·1	21 26·2	21 18·2	21 7·7	21 20·8		
„ 15	14 26	15 50	N.	1	21 39·2	21 31·6	21 13·7	21 2·4	21 21·7		21 20·8
„ 19	11 43	13 12	S.	1	21 41·9	21 25·2	21 14·0	20 55·4	21 19·1	No. 2	
„ 22	14 24	15 50	S.	2	21 33·2	21 21·5	21 21·9	21 8·4	21 21·2	21 20·8	
„ 26	12 0	13 30	N.	2	21 29·0	21 26·5	21 16·1	21 12·9	21 21·1		
„ 29	14 30	15 55	N.	1	21 38·2	21 30·4	21 11·5	21 4·0	21 21·0		
JULY 3	11 46	13 14	S.	1	21 40·2	21 28·7	21 13·6	20 58·0	21 20·1	No. 1	
„ 6	14 45	16 11	S.	2	21 32·5	21 24·6	21 16·7	21 9·5	21 20·8	21 21·6	
„ 10	11 58	13 24	N.	2	21 33·2	21 25·7	21 19·0	21 5·5	21 20·8		
„ 13	14 30	16 1	N.	1	21 40·9	21 26·1	21 26·6	20 58·2	21 22·9		
„ 17	11 39	13 4	S.	1	21 39·0	21 27·1	21 21·5	20 56·1	21 20·9		21 21·3
„ 20	14 23	15 48	S.	2	21 29·5	21 25·7	21 22·0	21 9·4	21 21·6	No. 2	
„ 24	12 3	13 31	N.	2	21 35·1	21 18·6	21 23·0	21 5·6	21 20·6	21 20·9	
„ 27	14 38	16 5	N.	1	21 41·9	21 32·0	21 19·0	20 58·4	21 22·8		
„ 31	11 56	13 22	S.	1	21 42·6	21 28·5	21 17·5	20 56·6	21 21·3		
AUG. 3	14 20	15 45	S.	2	21 37·9	21 23·2	21 19·0	21 4·0	21 21·0	No. 1	
„ 7	12 19	13 55	N.	2	21 31·4	21 26·5	21 17·2	21 14·0	21 22·3	21 23·3	
„ 9	14 46	16 10	N.	1	21 45·0	21 34·7	21 18·0	21 2·1	21 24·9		
„ 14	12 0	13 26	S.	1	21 44·9	21 26·2	21 18·1	21 0·2	21 22·3		
„ 18	14 19	15 45	S.	2	21 37·0	21 29·9	21 19·5	21 7·1	21 23·4		21 23·1
„ 21	12 4	13 33	N.	2	21 36·1	21 23·1	21 28·5	21 8·0	21 23·9	No. 2	
„ 24	14 21	15 48	N.	1	21 44·9	21 29·9	21 17·7	21 3·7	21 24·0	21 22·9	
„ 28	11 50	13 17	S.	1	21 43·9	21 27·5	21 17·0	21 0·1	21 22·1		
„ 31	14 15	15 42	S.	2	21 37·2	21 25·5	21 24·4	21 8·5	21 23·9		

1900. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
SEPT. 4	12 10	13 34	N.	2	21 33·6	21 27·2	21 13·4	21 18·4	21 23·1	No. 1	
„ 7	14 19	15 43	N.	1	21 45·2	21 34·7	21 15·5	21 1·5	21 24·2	21 23·6	
„ 11	12 2	13 32	S.	1	21 42·7	21 30·2	21 15·2	21 3·0	21 22·8		
„ 14	14 24	15 50	S.	2	21 43·0	21 22·7	21 23·6	21 3·4	21 23·2		
„ 18	12 21	13 49	N.	2	21 35·0	21 26·0	21 21·7	21 12·0	21 23·7		21 23·6
„ 21	14 30	16 14	N.	1	21 47·6	21 32·2	21 17·0	21 2·7	21 24·9	No. 2	
„ 25	11 50	13 17	S.	1	21 48·1	21 26·4	21 19·1	20 56·0	21 22·4	21 23·6	
„ 28	14 22	15 47	S.	2	21 40·4	21 24·9	21 23·9	21 8·2	21 24·3		
OCT. 2	12 14	13 40	N.	2	21 34·0	21 25·0	21 22·9	21 12·2	21 23·5	No. 1	
„ 5	14 45	16 3	N.	1	21 46·5	21 33·9	21 15·9	21 0·0	21 24·1	21 24·1	
„ 9	11 7	12 32	S.	1	21 44·4	21 29·6	21 15·6	20 59·2	21 22·2		
„ 12	14 20	15 42	S.	2	21 41·4	21 23·9	21 24·6	21 3·0	21 23·2		
„ 16	12 10	13 31	N.	2	21 35·2	21 22·7	21 21·0	21 13·6	21 23·1		21 24·0
„ 19	14 40	15 58	N.	1	21 45·4	21 33·2	21 20·7	21 1·0	21 25·1	No. 2	
„ 23	11 34	13 3	S.	1	21 47·7	21 30·0	21 21·2	21 2·1	21 25·2	21 24·0	
„ 26	14 22	15 46	S.	2	21 41·2	21 22·5	21 26·7	21 8·1	21 24·6		
„ 30	12 4	13 29	N.	2	21 31·9	21 24·5	21 28·4	21 17·0	21 25·4		
NOV. 2	14 36	16 4	N.	1	21 49·5	21 21·2	21 33·0	20 53·1	21 24·2	No. 1	
„ 6	11 33	12 57	S.	1	21 48·6	21 23·5	21 23·5	20 56·4	21 23·0	21 24·6	
„ 9	15 8	16 30	S.	2	21 38·7	21 25·7	21 31·5	21 2·2	21 24·5		
„ 13	11 59	13 22	N.	2	21 38·2	21 24·6	21 26·9	21 6·1	21 23·9		
„ 16	14 40	16 9	N.	1	21 43·6	21 34·9	21 16·2	21 8·1	21 25·7		21 24·5
„ 20	11 36	13 0	S.	1	21 43·2	21 36·1	21 15·4	21 2·2	21 24·2	No. 2	
„ 23	14 20	15 45	S.	2	21 39·7	21 18·2	21 28·4	21 7·2	21 23·4	21 24·3	
„ 27	12 0	13 25	N.	2	21 36·4	21 27·2	21 22·9	21 15·1	21 25·4		
„ 30	14 30	15 55	N.	1	21 42·9	21 34·1	21 17·2	21 9·6	21 25·9		
DEC. 4	11 37	13 2	S.	1	21 44·2	21 32·2	21 19·6	21 3·5	21 24·9	No. 1	
„ 7	14 10	15 36	S.	2	21 39·6	21 27·2	21 24·4	21 6·5	21 24·4	21 25·7	
„ 11	12 10	13 36	N.	2	21 34·6	21 26·6	21 24·2	21 12·2	21 24·4		
„ 14	14 28	15 55	N.	1	21 44·0	21 33·5	21 14·6	21 11·2	21 25·8		21 25·4
„ 18	11 44	13 10	S.	1	21 47·7	21 29·7	21 20·6	21 1·9	21 25·0		
„ 21	14 28	15 56	S.	2	21 43·0	21 24·7	21 27·7	21 9·0	21 26·1	No. 2	
„ 25	11 56	13 26	S.B.B.	2	21 39·7	21 26·1	21 27·5	21 9·0	21 25·6	21 25·1	
„ 28	14 30	16 0	S.B.B.	1	21 49·7	21 29·4	21 19·0	21 10·1	21 27·0		

The Mean Dip for the year... { With Needle No. 1 = 21 22·0 ; With Needle No. 2 = 21 21·8

The Mean Dip for the year 1900 = 21 21·9

Absolute Magnetical Observations.—Table III-*a*.

SUPPLEMENTARY OBSERVATIONS OF INCLINATION, 1900.

Taken with Barrow's Dip Circle, with Microscopes, No. 49, and two 3½-inch Needles, Nos. 1 and 2, by Dover.

1900. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
JAN. 2	10 52	13 46	S.	2	21 49·6	20 23·9	22 3·2	20 46·1	21 15·7		
„ 5	13 51	16 41	D.	1	21 42·6	20 35·9	22 5·5	20 51·5	21 18·9	No. 1	
„ 9	11 19	14 20	N.	1	21 45·1	20 36·9	22 7·1	20 39·0	21 17·0	° ′ 21 17·5	
„ 12	13 44	16 33	N.	2	21 48·2	20 20·1	22 13·0	20 42·7	21 16·0		
„ 16	11 0	13 49	S.	2	21 48·1	20 25·5	22 7·4	20 45·1	21 16·5		21 16·9
„ 19	13 42	16 30	S.	1	21 44·2	20 37·5	22 2·5	20 42·2	21 16·6		
„ 23	11 40	14 35	N.	1	21 45·5	20 34·4	22 11·1	20 39·7	21 17·7	No. 2	
„ 26	13 50	16 38	N.	2	21 49·6	20 15·1	22 19·1	20 44·1	21 17·0	° ′ 21 16·4	
„ 30	11 5	14 2	S.	2	21 49·2	20 16·7	22 18·7	20 42·7	21 16·8		
FEB. 2	13 40	16 36	S.	1	21 44·7	20 32·7	22 2·5	20 48·9	21 17·2		
„ 6	11 29	14 35	N.	1	21 43·6	20 34·4	22 3·4	20 53·1	21 18·6	No. 1	
„ 9	13 50	16 45	N.	2	21 53·0	20 12·4	22 36·7	20 19·2	21 15·3	° ′ 21 18·3	
„ 13	11 29	14 35	D.	2	21 43·9	20 15·9	22 38·4	20 25·1	21 15·8		
„ 16	14 19	17 35	D.	1	22 0·9	20 23·1	22 21·2	20 25·9	21 17·8		21 18·3
„ 20	11 10	14 10	N.	1	21 52·1	20 35·9	21 42·2	21 9·1	21 19·8	No. 2	
„ 23	13 42	17 0	N.	2	21 52·9	20 35·2	21 45·9	21 9·4	21 20·8	° ′ 21 18·2	
„ 26	11 29	14 29	D.	2	21 46·6	20 30·6	21 46·9	21 19·2	21 20·8		
MAR. 2	13 52	16 56	D.	1	21 40·7	20 53·2	21 35·1	21 18·2	21 21·8		
„ 6	11 25	14 30	N.	1	21 29·6	20 54·6	21 49·9	21 3·6	21 19·4		
„ 9	13 42	16 40	N.	2	21 41·7	20 45·1	21 52·9	21 4·6	21 21·1	No. 1 ° ′ 21 19·8	
„ 13	11 14	14 11	D.	2	21 37·2	20 54·6	21 47·4	21 4·1	21 20·8		
„ 16	14 21	17 20	D.	1	21 32·0	20 54·9	21 50·0	21 8·5	21 21·3		21 20·1
„ 20	11 20	14 25	N.	1	21 36·1	20 55·6	21 26·9	21 11·9	21 17·6		
„ 23	13 50	16 56	N.	2	21 38·7	20 46·6	22 10·6	20 48·5	21 21·1	No. 2 ° ′ 21 20·4	
„ 27	11 12	14 8	D.	2	21 34·9	20 46·5	22 9·6	20 43·0	21 18·5		
„ 30	14 5	16 58	D.	1	21 30·6	20 58·7	21 31·4	21 15·1	21 18·9		

1900. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
April 3	11 20	14 30	N.	1	21 36·4	20 56·0	21 33·1	21 15·5	21 20·2		
„ 6	13 58	16 58	N.	2	21 27·5	20 42·1	21 47·0	21 9·5	21 16·5	No. 1	
„ 10	11 5	14 1	S.	2	21 36·0	20 46·9	21 39·5	21 16·7	21 19·8	21° 19′·9	
„ 13	13 32	16 35	S.	1	21 23·7	21 7·7	21 29·2	21 15·2	21 18·9		
„ 17	11 13	14 5	S.	1	21 30·2	21 4·4	21 36·5	21 7·5	21 19·6		21 19·4
„ 20	13 36	16 43	S.	2	21 26·9	20 56·7	21 36·1	21 12·5	21 18·0	No. 2	
„ 24	11 5	14 22	S.	2	21 17·4	21 14·7	21 23·0	21 28·2	21 20·8	21° 18′·8	
„ 27	13 37	16 31	S.	1	21 36·1	20 56·4	21 25·4	21 26·5	21 21·1		
May 1	11 25	14 27	N.	1	21 10·4	21 15·0	21 32·6	21 25·9	21 21·0		
„ 4	13 50	16 41	N.	2	21 14·4	21 3·0	21 34·9	21 27·0	21 19·8	No. 1	
„ 8	10 49	13 40	S.	2	21 15·2	21 13·9	21 24·6	21 32·7	21 21·6	21° 20′·1	
„ 11	13 35	16 30	S.	1	21 19·4	21 17·2	21 37·1	21 12·5	21 21·5		
„ 15	11 20	14 14	N.	1	21 13·2	21 10·0	21 24·5	21 25·1	21 18·2		21 20·1
„ 18	13 28	16 26	N.	2	21 5·7	21 3·2	21 35·7	21 32·6	21 19·3	No. 2	
„ 22	10 55	13 49	S.	2	21 17·1	21 8·6	21 29·5	21 24·2	21 19·8	21° 20′·1	
„ 25	13 37	16 30	S.	1	21 22·5	21 3·9	21 40·9	21 16·5	21 20·9		
„ 29	11 19	14 11	N.	1	21 8·5	21 15·0	21 26·5	21 26·0	21 19·0		
June 1	13 45	16 39	N.	2	21 9·0	21 10·1	21 30·9	21 31·2	21 20·3	No. 1	
„ 5	11 0	13 56	S.	2	21 8·5	21 2·5	21 35·1	21 31·2	21 19·3	21° 20′·2	
„ 8	13 41	16 38	S.	1	21 17·4	21 9·0	21 36·2	21 18·5	21 20·3		
„ 12	11 9	14 5	N.	1	21 17·4	21 8·9	21 31·1	21 21·9	21 19·8		
„ 15	13 41	16 32	N.	2	21 9·1	21 2·5	21 33·0	21 31·2	21 18·9		21 19·9
„ 19	10 58	13 58	S.	2	21 10·9	21 4·4	21 32·2	21 28·7	21 19·0		
„ 22	13 39	16 38	S.	1	21 17·0	21 15·5	21 34·5	21 14·1	21 20·3	No. 2	
„ 26	11 15	14 15	N.	1	21 14·2	21 11·9	21 26·0	21 29·7	21 20·4	21° 19′·7	
„ 29	13 46	16 38	N.	2	21 8·0	21 12·9	21 28·9	21 34·2	21 21·0		
July 3	11 0	14 0	S.	2	21 8·0	21 12·0	21 31·4	21 26·7	21 19·5		
„ 6	14 0	16 55	S.	1	21 16·9	21 11·6	21 32·6	21 18·7	21 19·9	No. 1	
„ 10	11 15	14 9	N.	1	21 16·0	21 4·5	21 42·4	21 21·0	21 21·0	21° 21′·1	
„ 13	13 40	16 42	N.	2	21 9·4	21 8·0	21 45·9	21 19·5	21 20·7		
„ 17	10 53	13 47	S.	2	21 13·2	21 3·7	21 43·5	21 17·2	21 19·4		21 2·07
„ 20	13 38	16 33	S.	1	21 20·0	21 10·9	21 32·7	21 21·7	21 21·3		
„ 24	11 20	14 15	N.	1	21 19·7	21 2·9	21 39·0	21 27·6	21 22·3	No. 2	
„ 27	13 55	16 53	N.	2	21 12·6	21 4·2	21 46·5	21 21·9	21 21·3	21° 20′·3	
„ 31	11 10	14 10	S.	2	21 13·7	21 3·4	21 47·2	21 18·6	21 20·7		

1900. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m			° ′	° ′	° ′	° ′	° ′		° ′
AUG. 3	13 31	16 30	S.	1	21 22·0	21 4·6	21 44·0	21 13·0	21 20·9		
„ 7	11 28	14 35	N.	1	21 16·7	21 10·2	21 33·4	21 21·7	21 20·5	No. 1	
„ 9	14 6	16 59	N.	2	21 15·0	21 7·4	21 48·1	21 27·7	21 24·5		
„ 14	11 15	14 11	S.	2	21 17·0	21 7·7	21 44·2	21 21·9	21 22·7	21 21·8	
„ 18	13 30	16 30	S.	1	21 19·7	21 9·5	21 40·9	21 19·5	21 22·4		21 22·5
„ 21	11 29	14 20	N.	1	21 16·7	21 4·5	21 45·2	21 20·2	21 21·6	No. 2	
„ 24	13 35	16 35	N.	2	21 19·1	21 6·4	21 40·4	21 30·4	21 24·1		
„ 28	11 5	14 0	S.	2	21 20·6	21 5·0	21 40·5	21 24·7	21 22·7	21 23·5	
„ 31	13 29	16 29	S.	1	21 19·6	21 7·6	21 41·1	21 25·2	21 23·4		
SEPT. 4	11 30	14 18	N.	1	21 11·5	21 12·4	21 30·4	21 35·9	21 22·5	No. 1	
„ 7	13 39	16 28	N.	2	21 19·0	21 4·4	21 41·6	21 29·9	21 23·7		
„ 11	11 17	14 14	S.	2	21 17·2	21 3·7	21 46·5	21 26·0	21 23·3		
„ 14	13 39	16 36	S.	1	21 20·7	21 6·4	21 41·6	21 22·5	21 22·8	21 23·0	
„ 18	11 36	14 30	N.	1	21 19·2	21 8·6	21 48·1	21 18.6	21 23·6		21 23·[illegible]
„ 21	13 43	16 54	N.	2	21 20·7	21 1·5	21 45·1	21 25·1	21 23·1	No. 2	
„ 25	11 3	14 3	S.	2	21 17·1	21 3·9	21 41·7	21 25·4	21 22·0		
„ 28	13 35	16 31	S.	1	21 19·7	21 6·7	21 43·4	21 22·4	21 23·0	21 23·0	
OCT. 2	11 34	14 26	N.	1	21 14·0	21 10·1	21 49·2	21 13·1	21 21·6		
„ 5	14 6	16 45	N.	2	21 24·5	21 3·0	21 44·7	21 29·9	21 25·5	No. 1	
„ 9	10 25	13 15	S.	2	21 18·4	21 3·9	21 40·2	21 26·7	21 22·3		
„ 12	13 37	16 27	S.	1	21 21·1	21 8·5	21 45·2	21 20·1	21 23·7	21 23·0	
„ 16	11 25	14 13	N.	1	21 12·9	21 9·9	21 39·7	21 23·2	21 21·4		21 23·6
„ 19	13 58	16 37	N.	2	21 20·9	21 3·4	21 45·4	21 27·5	21 24·3	No. 2	
„ 23	10 49	13 46	S.	2	21 21·5	21 4·0	21 50·6	21 27·1	21 25·8		
„ 26	13 38	16 30	S.	1	21 21·4	21 6·4	21 48·2	21 21·0	21 24·2	21 24·5	
„ 30	11 19	14 12	N.	1	21 16·6	21 8·5	21 54·6	21 16·0	21 23·9		
NOV. 2	13 54	16 46	N.	2	21 20·5	21 7·1	21 47·6	21 24·0	21 24·8		
„ 6	10 50	13 40	S.	2	21 23·0	21 4·7	21 40·6	21 24·1	21 23·1	No. 1	
„ 9	14 25	17 16	S.	1	21 20·5	21 7·5	21 48·5	21 14·9	21 22·8		
„ 13	11 16	14 0	N.	1	21 20·1	21 8·9	21 48·2	21 22·9	21 25·0	21 23·7	
„ 16	13 58	16 55	N.	2	21 23·6	21 5·0	21 42·0	21 28·7	21 24·8		21 24·0
„ 20	10 50	13 45	S.	2	21 22·0	21 5·5	21 42·0	21 23·4	21 23·2	No. 2	
„ 23	13 31	16 30	S.	1	21 17·9	21 6·6	21 43·4	21 27·7	21 23·9		
„ 27	11 19	14 8	N.	1	21 16·5	21 6·0	21 43·9	21 26·7	21 23·3	21 24·1	
„ 30	13 47	16 35	N.	2	21 21·0	21 3·9	21 42·2	21 31·7	21 24·7		
DEC. 4	10 51	13 49	S.	2	21 19·1	21 6·9	21 44·2	21 26·4	21 24·1		
„ 7	13 25	16 28	S.	1	21 16·2	21 7·5	21 43·9	21 28·9	21 24·1	No. 1	
„ 11	11 26	14 15	N.	1	21 16·0	21 10·9	21 49·5	21 15·4	21 22·9		
„ 14	13 46	16 40	N.	2	21 21·2	21 2·0	21 44·9	21 29·7	21 24·4	21 24·7	
„ 18	11 0	13 55	S.	2	21 17·0	21 7·4	21 46·7	21 29·5	21 25·1		21 24·8
„ 21	13 40	16 42	S.	1	21 18·5	21 8·7	21 48·5	21 27·9	21 25·9	No. 2	
„ 25	11 4	14 15	S.B.B.	1	21 22·5	21 7·4	21 47·0	21 26·9	21 25·9		
„ 28	13 40	16 45	S.B.B.	2	21 23·1	21 4·5	21 47·7	21 28·5	21 25·9	21 24·9	

The Mean Dip for the year... { With Needle No. 1 = 21° 21′·1 ; With Needle No. 2 = 21 21·1

The Mean Dip for the year 1900 = 21° 21′·1

Absolute Magnetical Observations—Table III *b*.

SUPPLEMENTARY OBSERVATIONS OF INCLINATION, 1900.

Taken with New (Dover, Charlton's) Dip Circle, with Microscopes, No. 110 and two 3½-inch Needles, Nos. 1 and 2, by Dover.

1900. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
JAN. 2	14 10	15 27	S.	1	21 17·0	21 7·3	21 21·9	21 18·3	21 16·1		
„ 9	14 35	15 50	N.	2	21 15·9	21 1·5	21 25·1	21 30·0	21 18·1	No. 1	
„ 16	14 17	15 37	S.	1	21 13·2	21 7·1	21 26·5	21 17·1	21 16·0	° ′ 21 16·6	21 17·3
„ 23	14 55	16 8	N.	2	21 17·5	21 4·4	21 33·2	21 19·9	21 18·7	No. 2	
„ 30	14 18	15 37	S.	1	21 18·9	21 6·0	21 27·4	21 18·1	21 17·6	° ′ 21 18·4	
FEB. 6	14 52	16 15	N.	2	21 17·5	21 7·0	21 33·4	21 23·6	21 20·4	No. 1	
„ 13	15 1	16 30	D.	1	21 19·8	21 8·9	21 28·7	21 14·8	21 18·0	° ′ 21 18·0	
„ 20	14 25	15 30	N.	2	21 17·1	21 4·1	21 31·6	21 20·6	21 18·3	No. 2	21 18·7
„ 26	14 59	16 27	D.	1	21 20·4	21 6·2	21 29·1	21 16·9	21 18·1	° ′ 21 19·3	
MARCH. 6	14 45	16 0	N.	2	21 19·2	21 6·2	21 31·1	21 21·2	21 19·4	No. 1	
„ 13	14 29	15 50	D.	1	21 21·4	21 9·5	21 38·4	21 19·1	21 22·1	° ′ 21 21·0	
„ 20	14 40	15 57	N.	2	21 20·7	21 8·0	21 36·7	21 21·1	21 21·6	No. 2	21 20·7
„ 27	14 32	15 52	D.	1	21 18·2	21 12·2	21 33·9	21 15·4	21 19·9	° ′ 21 20·5	
APRIL. 3	14 44	16 0	N.	2	21 17·6	21 7·4	21 30·3	21 25·0	21 20·1	No. 1	
„ 10	14 21	15 41	S.	1	21 16·6	21 11·4	21 33·1	21 20·0	21 20·3	° ′ 21 20·8	
„ 17	14 25	15 44	S.	2	21 15·5	21 8·1	21 30·4	21 23·2	21 19·3	No. 2	21 20·3
„ 24	14 37	15 53	S.	1	21 27·7	21 12·3	21 26·2	21 19·4	21 21·4	° ′ 21 19·7	
MAY. 1	14 38	15 50	N.	2	21 21·8	21 6·6	21 36·9	21 21·5	21 21·7	No. 1	
„ 8	14 19	15 34	S.	1	21 24·3	21 13·7	21 31·2	21 20·4	21 22·4	° ′ 21 21·4	
„ 15	14 30	15 39	N.	2	21 23·5	21 5·3	21 24·3	21 27·9	21 20·2	No. 2	21 21·0
„ 22	14 22	15 46	S.	1	21 18·2	21 10·9	21 27·0	21 25·6	21 20·4	° ′ 21 20·8	
„ 29	14 26	15 38	N.	2	21 19·1	21 6·5	21 33·1	21 22·9	21 20·4		
JUNE. 5	14 20	15 39	S.	1	21 17·2	21 6·0	21 35·1	21 26·2	21 21·1	No. 1	
„ 12	14 20	15 34	N.	2	21 22·2	21 7·1	21 36·1	21 22·4	21 21·9	° ′ 21 19·9	
„ 19	14 25	15 45	S.	1	21 15·9	21 8·6	21 30·7	21 19·7	21 18·7	No. 2	21 20·5
„ 26	14 30	15 44	N.	2	21 19·7	21 4·9	21 33·8	21 22·7	21 20·3	° ′ 21 21·1	

1900. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
JULY. 3	14 24	15 40	S.	1	21 19·4	21 8·4	21 34·5	21 23·4	21 21·4	No. 1	
,, 10	14 22	15 42	N.	2	21 19·1	21 6·6	21 35·3	21 24·2	21 21·3	° ′ 21 21·3	
,, 17	14 20	15 42	S.	1	21 19·8	21 9·4	21 29·5	21 25·1	21 20·9		21 21·6
,, 24	14 29	15 39	N.	2	21 30·4	21 0·9	21 38·1	21 21·4	21 22·7	No. 2	
,, 31	14 40	16 11	S.	1	21 17·5	21 9·0	21 32·3	21 27·2	21 21·5	° ′ 21 22·0	
AUG. 7	14 47	16 16	N.	2	21 16·4	21 13·8	21 38·4	21 29·2	21 24·4	No. 1	
,, 14	14 25	15 44	S.	1	21 19·6	21 11·4	21 34·3	21 28·4	21 23·4	° ′ 21 24·0	
,, 21	14 30	15 39	N.	2	21 23·5	21 8·6	21 42·1	21 27·3	21 25·4		21 24·4
,, 28	14 25	15 45	S.	1	21 19·2	21 14·9	21 36·2	21 28·1	21 24·6	No. 2	
										° ′ 21 24·9	
SEPT. 4	14 33	15 58	N.	2	21 23·1	21 7·5	21 36·1	21 26·3	21 23·2	No. 1	
,, 11	14 25	15 46	S.	1	21 20·6	21 12·2	21 35·2	21 28·2	21 24·0	° ′ 21 23·8	
,, 18	14 42	15 58	N.	2	21 20·1	21 6·4	21 34·7	21 26·3	21 21·9		21 23·2
,, 25	14 22	15 42	S.	1	21 16·9	21 12·3	21 34·7	21 30·5	21 23·6	No. 2	
										° ′ 21 22·5	
OCT. 2	14 39	15 50	N.	2	21 30·9	21 4·4	21 43·9	21 18·8	21 24·5	No. 1	
,, 9	13 40	14 59	S.	1	21 18·2	21 13·4	21 33·9	21 28·7	21 23·5	° ′ 21 24·0	
,, 16	14 20	15 33	N.	2	21 18·4	21 9·2	21 41·1	21 27·7	21 24·1		21 24·0
,, 23	14 22	15 44	S.	1	21 20·5	21 12·2	21 34·8	21 30·7	21 24·5	No. 2	
,, 30	14 35	15 40	N.	2	21 13·6	21 14·5	21 38·1	21 27·2	21 23·3	° ′ 21 24·0	
NOV. 6	14 21	15 43	S.	1	21 19·9	21 11·4	21 36·1	21 28·6	21 24·0	No. 1	
,, 13	14 10	15 26	N.	2	21 30·2	21 8·7	21 45·2	21 21·1	21 26·3	° ′ 21 24·2	
,, 20	14 22	15 44	S.	1	21 20·1	21 13·2	21 34·9	21 29·5	21 24·4		21 25·5
,, 27	14 20	15 33	N.	2	21 28·4	21 10·1	21 44·7	21 25·9	21 27·3	No. 2	
										° ′ 21 26·8	
DEC. 4	14 20	15 41	S.	1	21 20·9	21 14·8	21 36·4	21 28·6	21 25·2	No. 1	
,, 11	14 30	15 45	N.	2	21 24·6	21 7·4	21 42·4	21 21·2	21 23·9	° ′ 21 25·2	
,, 18	14 20	15 43	S.	1	21 21·6	21 14·7	21 36·2	21 28·9	21 25·3		21 24·6
,, 25	14 35	15 48	S. B. B.	2	21 20·7	21 11·5	21 39·9	21 24·5	21 24·1	No. 2	
										° ′ 21 24·0	

The Mean Dip for the year ... - ... { With Needle No. 1 = ° ′ 21 21·5 ; With Needle No. 2 = 21 22·0

The Mean Dip for the year 1900 = ° ′ 21 21·8

Absolute Magnetical Observations.—Table I.

Observations of Vibration and Deflection, taken with the Kew Unifilar Magnetometer (No. 23, by Elliott Brothers), for the determination of Absolute Horizontal Force.

1901.

1901. Date.	Civil Time, Mean.	Magnet N. 23 *a*. Time of one Vibration.	Effect of 90° Torsion.	Temperature.	Rate of Chronometer.	Corresponding Mean Reading of L. H. F. Magnetometer. Scale Reading.	Thermometer.	Angle of Deflection of Magnet N. 23 *c* by N. 23 *a* at Distance. 0·8 foot.	1·0 foot	Temperature.	Corresponding Mean Reading of L. H. F. Magnetometer. Scale Reading	Thermometer.	Observer.	Calculated Results in English Units. Values of m.	Values of X. From Deflections at distance. 0·8 foot ($X_{0·8}$)	1·0 foot ($X_{1·0}$)	Difference. $X_{0·8} - X_{1·0}$	Mean. $\frac{X_{0·8} + X_{1·0}}{2}$	Monthly Mean Values of X.	Monthly Mean Values of X in Metrical Units.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	h. m.	s.	Sc. div.	°	s.		°	° ′ ″	° ′ ″	°		°								
JANUARY 2	12 36	2·8556	0·72	82·8	+3·9	16·50	78·8	17 18 2	8 47 31	82·4	16·42	79·7	S.	·63049	8·1158	8·1165	−·0007	8·1161		
,, ,,	15 39	2·8546	0·72	78·8	,,	16·36	80·3	17 17 57	8 47 39	82·7	16·49	80·4	S.	·63049	8·1154	8·1147	+·0007	8·1150		
,, 9	12 10	2·8532	0·77	79·4	+3·8	17·43	78·2	17 18 19	8 47 46	78·4	17·28	78·8	G.S.J.	·63057	8·1223	8·1223	·0000	8·1223		
,, ,,	15 38	2·8537	0·80	77·8	,,	16·74	80·0	17 18 5	8 47 50	79·0	16·99	79·8	G.S.J.	·63051	8·1197	8·1182	+·0015	8·1189		
,, 16	12 0	2·8537	0·79	80·5	+3·8	17·44	75·9	17 15 52	8 46 45	80·6	17·27	76·6	S.	·63001	8·1289	8·1274	+·0015	8·1281	8·1217	3·7448
,, ,,	15 9	2·8547	0·76	82·7	,,	16·77	78·0	17 16 22	8 46 56	81·4	17·02	77·3	S.	·63023	8·1255	8·1244	+·0011	8·1249		
,, 23	12 28	2·8555	0·77	84·2	+3·5	16·88	79·1	17 14 36	8 46 2	84·8	16·64	80·3	N.	·62978	8·1281	8·1272	+·0009	8·1276		
,, ,,	15 23	2·8570	0·81	85·0	,,	15·82	82·6	17 14 52	8 46 15	84·9	16·01	81·8	N.	·62967	8·1233	8·1218	+·0015	8·1225		
,, 30	13 28	2·8549	0·98	82·1	+4·2	16·90	78·9	17 16 44	8 46 55	83·0	16·64	79·8	S.B.B.	·63016	8·1212	8·1216	−·0004	8·1214		
,, ,,	16 3	2·8563	0·97	83·1	,,	16·17	80·5	17 16 16	8 46 36	83·4	16·44	80·4	S.B.B.	·62997	8·1195	8·1206	−·0011	8·1200		
FEBRUARY 6	12 11	2·8534	0·60	76·9	+3·9	17·28	77·2	17 18 8	8 47 48	76·2	17·19	77·7	N.	·63023	8·1225	8·1216	+·0009	8·1220		
,, ,,	15 41	2·8544	0·63	77·1	,,	16·58	78·5	17 18 37	8 47 51	76·9	16·80	78·3	N.	·63027	8·1175	8·1178	−·0003	8·1176		
,, 13	12 27	2·8541	0·81	77·5	+4·5	17·93	74·9	17 17 52	8 47 34	78·1	17·55	75·8	S.B.B.	·63000	8·1201	8·1197	+·0004	8·1199		
,, ,,	15 32	2·8541	0·83	77·6	,,	17·18	77·1	17 18 33	8 47 42	78·5	17·31	76·4	S.B.B.	·63030	8·1171	8·1184	−·0013	8·1177	8·1213	3·7446
,, 20	12 0	2·8536	0·73	79·0	+4·6	17·72	76·3	17 17 12	8 47 22	78·9	17·48	77·2	N.	·63020	8·1247	8·1236	+·0011	8·1241		
,, ,,	15 35	2·8542	0·75	79·2	,,	16·97	78·1	17 17 20	8 47 22	79·8	16·94	78·1	N.	·63020	8·1219	8·1212	+·0007	8·1215		
,, 27	12 16	2·8537	0·76	83·3	+4·1	17·02	82·0	17 16 10	8 46 39	85·4	16·84	82·1	S.	·63054	8·1259	8·1261	−·0002	8·1260		
,, ,,	15 37	2·8553	0·74	84·9	,,	16·40	82·8	17 16 7	8 46 47	86·2	16·52	83·0	S.	·63054	8·1221	8·1212	+·0009	8·1216		
MARCH 7	12 51	2·8538	0·76	81·5	+3·2	17·06	80·1	17 16 15	8 46 53	82·5	16·88	80·7	N.	·63027	8·1264	8·1253	+·0011	8·1258		
,, ,,	15 35	2·8557	0·78	83·5	,,	16·22	81·4	17 16 51	8 46 57	83·6	16·37	81·3	N.	·63030	8·1195	8·1201	−·0006	8·1198		
,, 13	12 47	2·8561	0·69	92·2	+4·0	16·05	86·0	17 15 48	8 46 36	90·7	15·77	86·9	S.B.B.	·63091	8·1234	8·1227	+·0007	8·1230		
,, ,,	14 38	2·8562	0·78	88·7	,,	15·35	87·8	17 17 0	8 47 6	90·5	15·62	87·3	S.B.B.	·63112	8·1156	8·1156	·0000	8·1156	8·1221	3·7449
,, 20	12 2	2·8563	0·83	89·5	+4·0	16·38	85·0	17 14 56	8 46 7	87·7	16·14	85·4	N.	·63017	8·1262	8·1261	+·0001	8·1261		
,, ,,	15 21	2·8577	0·80	87·7	,,	15·38	86·8	17 15 17	8 46 17	87·3	15·60	86·6	N.	·62998	8·1197	8·1195	+·0002	8·1196		
,, 27	11 49	2·8567	0·75	86·7	+4·0	16·42	84·2	17 14 15	8 45 44	87·5	16·14	85·5	S.B.B.	·62974	8·1257	8·1257	·0000	8·1257		
,, ,,	15 21	2·8574	0·83	87·7	,,	15·33	87·0	17 14 56	8 46 10	88·0	15·65	86·6	S.B.B.	·63006	8·1214	8·1208	+·0006	8·1211		

1901. Date.	Civil Time, Mean.	Magnet N. 23 *a*. Time of one Vibration.	Effect of 90° Torsion.	Temperature.	Rate of Chronometer.	Corresponding Mean Reading of L. H. F. Magnetometer. Scale Reading.	Thermometer.	Angle of Deflection of Magnet N. 23 *c* by N. 23 *a* at Distance. 0·8 foot.	1·0 foot.	Temperature.	Corresponding Mean Reading of L. H. F. Magnetometer. Scale Reading.	Thermometer.	Observer.	Calculated Results in English Units. Values of m.	Values of X. From Deflections at distance. 0·8 foot ($X_{0.8}$)	1·0 foot ($X_{1.0}$)	Difference. $X_{0.8}-X_{1.0}$	Mean. $\frac{X_{0.8}+X_{1.0}}{2}$	Monthly Mean Values of X.	Monthly Mean Values of X in Metrical Units.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	h. m.	s.	Sc.div.	°	s.		°	° ′ ″	° ′ ″	°		°								
April 3	12 16	2·8554	0·62	86·5	+3·4	16·36	86·1	17 14 5	8 45 46	87·5	16·07	86·7	N.	·62993	8·1300	8·1291	+·0009	8·1295		
,, ,,	15 23	2·8580	0·71	88·3	,,	15·35	87·4	17 14 31	8 45 52	88·1	15·59	87·2	N.	·62981	8·1219	8·1219	·0000	8·1219		
,, 10	11 45	2·8569	0·75	87·2	+4·2	16·16	85·7	17 14 2	8 45 45	87·7	15·98	86·5	S.B.B.	·62972	8·1262	8·1253	+·0009	8·1257		
,, ,,	15 4	2·8582	0·78	88·8	,,	15·33	87·6	17 14 30	8 45 48	88·2	15·55	87·4	S.B.B.	·62977	8·1218	8·1223	−·0005	8·1220		
,, 17	12 15	2·8569	0·70	88·2	+3·5	15·80	86·6	17 14 51	8 46 5	88·4	15·62	87·2	N.	·63003	8·1234	8·1231	+·0003	8·1232	8·1229	3·7453
,, ,,	15 27	2·8581	0·78	89·5	,,	15·08	88.1	17 14 42	8 45 56	89·9	15·31	87·8	N.	·63001	8·1201	8·1203	−·0002	8·1202		
,, 24	11 50	2·8577	0·66	89·0	+4·0	15·48	85·9	17 15 0	8 45 58	89·3	15·39	86·8	S.B.B.	·63003	8·1204	8·1216	−·0012	8·1210		
,, ,,	14 59	2·8582	0·71	89·8	,,	15·10	87·7	17 14 49	8 45 55	90·2	15·21	87·4	S.B.B.	·63001	8·1197	8·1204	−·0007	8·1200		
May 1	12 10	2·8571	0·80	90·0	+3·7	15·57	89·6	17 14 1	8 45 45	90·8	15·38	90·3	N.	·63004	8·1249	8·1240	+·0009	8·1244		
,, ,,	15 24	2·8582	0·77	90·5	,,	14·91	91·0	17 14 45	8 45 55	89·8	15·04	91·0	N.	·63004	8·1208	8·1212	−·0004	8·1210		
,, 8	12 7	2·8565	0·83	88·8	+5·3	15·96	88·0	17 13 15	8 45 25	90·3	15·88	88·6	S.	·62991	8·1294	8·1279	+·0015	8·1286		
,, ,,	15 22	2·8578	0·83	88·8	,,	15·35	89·8	17 13 5	8 45 27	89·9	15·55	89·3	S.	·62962	8·1266	8·1244	+·0022	8·1255		
,, 15	12 6	2·8569	0·69	89·6	+4·0	15·51	90·0	17 13 33	8 45 29	90·8	15·32	90·4	N.	·62991	8·1274	8·1268	+·0006	8·1271	8·1240	3·7458
,, ,,	15 16	2·8593	0·69	91·8	,,	14·66	91·1	17 13 40	8 45 25	91·6	14·89	91·1	N.	·62977	8.1212	8·1214	−·0002	8·1213		
,, 22	12 4	2·8576	0·71	90·5	+4·5	15·52	89·6	17 13 26	8 45 27	91·7	15·41	90·2	S.B.B.	·62991	8·1257	8·1247	+·0010	8·1252		
,, ,,	15 15	2·8583	0·74	90·7	,,	14·85	91·0	17 13 31	8 45 16	91·7	15·17	90·7	S.B.B.	·62985	8·1234	8·1244	−·0010	8·1239		
,, 29	12 17	2·8577	0·75	90·8	+3·7	15·41	90·3	17 14 3	8 45 36	91·2	15·21	91·1	N.	·62996	8·1236	8·1238	−·0002	8·1237		
,, ,,	15 33	2·8587	0·73	90·9	,,	14·64	91·8	17 14 32	8 45 53	91·4	14·82	91·6	N.	·63004	8·1190	8·1190	·0000	8·1190		
June 5	12 26	2·8584	0·79	92·7	+4·5	15·22	91·0	17 12 37	8 45 5	93·4	15·11	91·2	S.	·62974	8·1268	8·1257	+·0011	8·1262		
,, ,,	15 23	2·8591	0·77	93·5	,,	14·65	92·0	17 12 55	8 45 13	93·7	14·76	91·9	S.	·62983	8·1240	8·1231	+·0009	8·1235		
,, 12	13 5	2·8563	0·55	83·8	+5·2	15·79	84·5	17 15 32	8 46 30	84·4	15·83	84·4	N.	·62990	8·1229	8·1218	+·0011	8·1223		
,, ,,	15 10	2·8564	0·60	83·3	,,	15·73	84·2	17 15 25	8 46 25	84·2	15·74	84·5	N.	·62980	8·1225	8·1218	+·0007	8·1221		
,, 19	12 11	2·8568	0·63	87·1	+3·7	15·84	84·8	17 14 0	8 45 47	88·1	15·73	85·3	S.	·62978	8·1264	8·1251	+·0013	8·1257	8·1242	3·7459
,, ,,	15 6	2·8575	0·66	86·8	,,	15·38	85·0	17 14 6	8 45 46	88·1	15·57	85·3	S.	·62974	8·1236	8·1229	+·0007	8·1232		
,, 27	12 13	2·8570	0·49	88·7	+3·1	15·81	87·0	17 13 47	8 45 37	89·0	15·71	87·2	N.	·62981	8·1274	8·1264	+·0010	8·1269		
,, ,,	15 29	2·8578	0·48	88·7	,,	15·15	87·8	17 13 47	8 45 40	89·8	15·42	87·8	N.	·62988	8·1244	8·1233	+·0011	8·1238		
July 3	12 9	2·8567	0·50	85·4	+3·2	16·06	83·8	17 14 22	8 45 56	86·0	15·98	84·0	S.	·62965	8·1259	8·1249	+·0010	8·1254		
,, ,,	15 18	2·8574	0·51	86·5	,,	15·63	84·2	17 14 37	8 46 4	86·4	15·76	84·3	S.	·62977	8·1234	8·1223	+·0011	8·1228		
,, 11	12 32	2·8561	0·60	87·1	+3·2	16·11	85·2	17 14 50	8 46 6	86·7	15·89	85·5	N.	·63000	8·1264	8·1259	+·0005	8·1261		
,, ,,	15 37	2·8575	0·56	86·5	,,	15·35	85·1	17 15 35	8 46 20	86·5	15·52	85·0	N.	·62997	8·1193	8·1197	−·0004	8·1195		
,, 17	12 15	2·8563	0·71	86·5	+2·7	15·76	84·8	17 15 2	8 46 16	87·8	15·52	85·2	S.B.B.	·63004	8·1234	8·1223	+·0011	8·1228		
,, ,,	15 28	2·8580	0·66	85·6	,,	15·04	85·0	17 15 7	8 46 12	86·8	15·36	85·0	S.B.B.	·62978	8·1184	8·1182	+·0002	8·1183	8·1228	3·7453
,, 24	12 19	2·8555	0·53	82·8	+3·0	16·25	83·5	17 15 12	8 46 17	83·3	16·08	83·4	N.	·62971	8·1262	8·1257	+·0005	8·1259		
,, ,,	15 42	2·8563	0·55	82·4	,,	15·58	83·0	17 16 2	8 46 35	83·0	15·72	83·3	N.	·62987	8·1208	8·1212	−·0004	8·1210		
,, 31	12 14	2·8568	0·56	86·6	+2·6	16·07	84·0	17 14 37	8 46 2	86·8	15·83	84 3	S.	·62974	8·1247	8·1238	+·0009	8·1242		
,, ,,	15 16	2·8576	0·54	88·0	,,	15·41	84·5	17 14 57	8 46 10	87·1	15·56	84·6	S.	·62996	8·1221	8·1216	+·0005	8·1218		

August	7	12 10	2·8555	0·62	84·0	+2·8	16·36	82·2	17 15 2	8 46 7	83·6	16·29	82·4	N.	·62978	8·1276	8·1277	−·0001	8·1276		
	"	15 18	2·8559	0·62	82·7	"	15·77	82·5	17 15 18	8 46 20	84·4	15·98	82·6	N.	·62990	8·1234	8·1229	+·0005	8·1231		
	14	12 14	2·8551	0·56	83·7	+3·3	16·60	83·1	17 14 50	8 45 57	84·6	16·40	83·5	S.	·62980	8·1283	8·1291	−·0008	8·1287		
	"	15 18	2·8576	0·60	85·0	"	14·97	83·5	17 15 50	8 46 25	84·8	15·43	83·5	S.	·62994	8·1184	8·1191	−·0007	8·1187		
	21	13 21	2·8566	0·66	85·8	+4·1	15·84	82·6	17 15 5	8 46 7	86·0	15·67	83·1	S.	·62981	8·1234	8·1238	−·0004	8·1236	8·1229	3·7453
	"	15 46	2·8577	0·60	85·0	"	15·37	83·5	17 15 15	8 46 2	86·0	15·50	83·2	S.	·62961	8·1191	8·1206	−·0015	8·1198		
	28	12 31	2·8572	0·68	86·8	+3·2	15·50	84·3	17 14 27	8 45 57	86·7	15·38	84·7	S.	·62964	8·1240	8·1231	+·0009	8·1235		
	"	15 29	2·8577	0·63	84·8	"	15·11	84·4	17 15 5	8 46 12	86·7	15·16	84·9	S.	·62969	8·1188	8·1184	+·0004	8·1186		
Sept.	4	12 23	2·8566	0·66	83·8	+3·3	15·48	83·0	17 15 38	8 46 39	84·7	15·51	83·2	N.	·62990	8·1208	8·1191	+·0017	8·1199		
	"	15 24	2·8572	0·73	85·9	"	15·38	83·9	17 14 57	8 46 7	85·0	15·49	83·8	N.	·62968	8·1231	8·1229	+·0002	8·1230		
	11	13 29	2·8581	0·64	87·4	+3·0	15·11	84·8	17 15 6	8 46 11	86·7	14·99	85·0	S.	·62967	8·1199	8·1197	+·0002	8·1198		
	"	15 30	2·8584	0·72	83·5	"	14·83	84·0	17 16 2	8 46 45	85·7	14·88	84·7	S.	·62969	8·1130	8·1120	+·0010	8·1125		
	18	12 33	2·8580	0·54	87·1	+3·2	15·24	85·7	17 15 5	8 46 5	87·7	15·14	86·0	N.	·62975	8·1193	8·1199	−·0006	8·1196	8·1194	3·7437
	"	15 29	2·8581	0·57	86·5	"	14·89	86·7	17 15 4	8 46 13	87·9	14·96	86·5	N.	·62977	8·1182	8·1176	+·0006	8·1179		
	25	11 58	2·8580	0·67	87·6	+3·2	15·56	85·7	17 14 10	8 45 37	88·0	15·46	86·0	S.	·62956	8·1236	8·1242	−·0006	8·1239		
	"	16 1	2·8588	0·62	87·8	"	15·03	86·6	17 14 45	8 45 52	88·6	15·19	86·5	S.	·62964	8·1180	8·1188	−·0008	8·1184		
Oct.	2	12 26	2·8572	0·61	86·8	+3·3	15·53	86·0	17 15 35	8 46 17	84·7	15·39	86·2	N.	·62978	8·1221	8·1229	−·0008	8·1225		
	"	15 38	2·8585	0·62	87·5	"	14·84	87·0	17 15 19	8 46 20	86·1	15·06	87·0	N.	·62977	8·1186	8·1180	+·0006	8·1183		
	9	12 22	2·8581	0·60	85·5	+3·2	15·40	83·8	17 16 44	8 46 56	85·4	15·04	84·2	S.	·62981	8·1133	8·1135	−·0002	8·1134		
	"	15 25	2·8587	0·63	85·0	"	14·55	84·6	17 16 51	8 46 57	85·3	14·87	84·7	S.	·62996	8·1107	8·1115	−·0008	8·1111		
	16	11 40	2·8567	0·62	85·9	+2·5	16·00	83·2	17 14 53	8 46 8	86·2	15·79	83·7	S.	·62977	8·1238	8·1233	+·0005	8·1235	8·1182	3·7431
	"	15 33	2·8586	0·60	85·2	"	15·11	84·0	17 15 31	8 46 27	86·5	15·24	84·0	S.	·62965	8·1152	8·1147	+·0005	8·1149		
	23	11 47	2·8568	0·70	86·2	+2·9	15·54	85·4	17 15 2	8 46 4	86·8	15·41	85·9	S.	·62984	8·1225	8·1231	−·0006	8·1228		
	"	15 56	2·8583	0·73	86·5	"	14·92	86·5	17 14 48	8 46 0	88·4	15·04	86·6	S.	·62968	8·1180	8·1180	·0000	8·1180		
	30	12 14	2·8575	0·80	89·6	+3·2	15·59	85·7	17 14 40	8 46 1	88·9	15·38	86·5	N.	·62996	8·1229	8·1223	+·0006	8·1226		
	"	15 31	2·8594	0·85	88·9	"	14·67	87·9	17 14 45	8 46 9	89·9	14·90	87·5	N.	·62975	8·1156	8·1143	+·0013	8·1149		
Nov.	6	12 22	2·8579	0·84	91·2	+3·1	15·27	87·2	17 12 18	8 44 55	92·1	14·99	88·4	S.B.B.	·62952	8·1289	8·1277	+·0012	8·1283		
	"	15 22	2·8595	0·88	88·2	"	14·61	89·6	17 13 45	8 45 37	91·2	14·71	89·6	S.B.B.	·62942	8·1171	8·1161	+·0010	8·1166		
	14	12 13	2·8572	0·88	88·5	+3·2	16·11	84·6	17 14 13	8 45 47	88·4	15·98	85·1	N.	·62980	8·1249	8·1244	+·0005	8·1246		
	"	15 21	2·8584	0·76	88·2	"	15·27	86·7	17 15 2	8 46 16	88·0	15·43	86·6	N.	·62985	8·1188	8·1176	+·0012	8·1182	8·1211	3·7445
	20	12 2	2·8575	0·94	88·6	+3·4	15·68	85·3	17 14 27	8 46 1	88·3	15·45	86·2	S.B.B.	·62980	8·1233	8·1218	+·0015	8·1222		
	"	15 18	2·8586	0·87	88·4	"	14·92	87·3	17 15 42	8 46 26	87·9	15·09	87·3	S.B.B.	·62998	8·1156	8·1158	−·0002	8·1157		
	27	12 16	2·8553	0·98	84·0	+3·3	16·68	81·0	17 15 20	8 46 22	84·9	16·48	81·6	N.	·62997	8·1253	8·1246	+·0007	8·1249		
	"	15 29	2·8565	0·95	83·5	"	15·91	82·8	17 16 2	8 46 35	85·5	16·02	82·9	N.	·63000	8·1182	8·1186	−·0004	8·1184		
Dec.	4	12 17	2·8567	0·67	86·8	+3·1	15·90	84·9	17 15 10	8 46 16	89·8	15·59	85·4	S.	·63012	8·1204	8·1199	+·0005	8·1201		
	"	15 23	2·8585	0·66	87·3	"	15·33	86·0	17 15 26	8 46 23	89·0	15·36	85·8	S.	·62987	8·1152	8·1148	+·0004	8·1150		
	11	13 0	2·8575	0·86	88·0	+3·2	16·15	83·9	17 15 23	8 46 25	87·7	15·98	84·6	N.	·63000	8·1197	8·1188	+·0009	8·1192		
	"	15 14	2·8586	0·86	87·5	"	15·54	86·1	17 15 26	8 46 26	88·1	15·66	86·1	N.	·62985	8·1158	8·1148	+·0010	8·1153		
	18	12 43	2·8572	0·86	86·6	+3·1	16·60	81·1	17 15 27	8 46 30	87·9	16·45	82·0	S.B.B.	·63006	8·1190	8·1176	+·0014	8·1183	8·1186	3·7433
	"	15 28	2·8577	0·87	86·6	"	16·06	84·1	17 15 30	8 46 28	87·9	16·23	83·3	S.B.B.	·62996	8·1173	8·1163	+·0010	8·1168		
	25	11 52	2·8572	0·85	85·6	+3·1	16·71	81·2	17 14 37	8 46 6	83·9	16·45	82·4	S.B.B.	·62942	8·1249	8·1236	+·0013	8·1242		
	"	14 47	2·8567	0·84	83·0	"	15·88	84·0	17 15 7	8 46 18	85·9	16·10	83·3	S.B.B.	·62972	8·1204	8·1195	+·0009	8·1199		
The mean value of the Horizontal Force for the year 1901 = 8·1216																					3·7447

133501

Absolute Magnetical Observations.—Table II.

Observations of Absolute Declination.

1901.

1901. Date.	Bombay Civil Time.	Mean Readings. Collimator Magnet. Scale apparently Erect.	Collimator Magnet. Scale apparently Inverted.	Horizontal Circle with Telescope pointed to: Scale of Collimator Magnet.	Horizontal Circle with Telescope pointed to: Tárdeo Chimney.	Torsion. Mean.	Torsion. Effect of 90°	Observer.	Corresponding Reading of Declination Magnetograph.	Absolute Easterly Declination corrected for Torsion.	Monthly Mean. Corresponding Reading of Declination Magnetograph.	Monthly Mean. Absolute Easterly Declination.
1	2	3	4	5	6	7	8	9	10	11	12	13
	h. m.	Sc. div.	Sc. div.	° ′ ″	° ′ ″	°	Sc. div		Sc. div.	° ′ ″	Sc. div.	° ′ ″
JAN. 3	11 22	+1·56	+1·39	16 50 20	196 54 20	0		S.	18·30	0 22 37		
„ 10	11 22	+1·57	+1·39	16 50 25	196 54 10	0		S.B.B.	18·39	0 22 53		
„ 17	11 26	+1·56	+1·36	16 50 20	196 53 27	0		S.	18·42	0 23 33	18·40	0 23 16
„ 24	11 42	+1·54	+1·36	16 50 30	196 53 50	0		N.	18·40	0 23 18		
„ 31	11 6	+1·54	+1·39	16 51 30	196 54 5	0		S.B.B.	18·50	0 24 1		
FEB. 7	11 58	+1·52	+1·54	16 50 0	196 54 15	0		N.	18·25	0 22 10		
„ 14	12 2	+1·52	+1·42	16 49 50	196 54 20	0		S.B.B.	18·20	0 22 3	18·27	0 22 30
„ 21	11 51	+1·55	+1·47	16 51 30	196 54 40	0		N.	18·38	0 23 22		
„ 28	11 25	+1·56	+1·40	16 50 27	196 54 40	0		S.	18·26	0 22 24		
MARCH 8	11 29	+1·59	+1·44	16 49 20	196 54 45	15 E	0·77	N.	18·11	0 20 53		
„ 14	11 29	+1·60	+1·32	16 49 45	196 54 5	0		S.B.B.	18·29	0 22 25	18·20	0 21 22
„ 21	11 46	+1·52	+1·59	16 48 25	196 54 0	0		N.	18·16	0 20 47		
„ 29	11 6	+1·52	+1·42	16 48 40	196 53 50	0		S.B.B.	18·25	0 21 23		
APRIL 4	11 49	+1·54	+1·49	16 47 10	196 53 35	0		N.	17·99	0 20 4		
„ 11	11 9	+1·55	+1·47	16 48 10	196 53 30	0		S.B.B.	18·13	0 21 12	18·13	0 21 11
„ 18	11 45	+1·52	+1·46	16 49 0	196 53 50	0		N.	18·21	0 21 40		
„ 25	11 30	+1·59	+1·50	16 49 10	196 53 55	0		S.B.B.	18·20	0 21 47		
MAY 2	11 50	+1·56	+1·44	16 48 20	196 54 20	0		N.	18·08	0 20 34		
„ 9	11 13	+1·56	+1·40	16 48 0	196 54 20	10W	0·77	S.	18·06	0 20 29		
„ 16	11 41	+1·52	+1·44	16 47 40	196 53 52	0		N.	18·07	0 20 20	18·07	0 20 35
„ 23	11 24	+1·54	+1·47	16 48 30	196 53 20	0		S.B.B.	18·19	0 21 40		
„ 30	11 52	+1·56	+1·50	16 47 0	196 53 50	10W	0·77	N.	17·97	0 19 52		
JUNE 6	11 36	+1·57	+1·44	16 46 30	196 53 40	0		S.	17·89	0 19 24		
„ 13	12 16	+1·55	+1·45	16 48 10	196 53 30	0		N.	18·16	0 21 13		
„ 20	11 5	+1·57	+1·41	16 49 10	196 54 30	0		S.	18·13	0 21 17	18·04	0 20 30
„ 28	12 0	+1·52	+1·51	16 47 15	196 53 35	0		N.	18·00	0 20 6		
JULY 4	11 16	+1·56	+1·44	16 47 0	196 53 10	0		S.	18·00	0 20 24		
„ 10	12 49	+1·59	+1·44	16 46 40	196 53 10	0		N.	18·04	0 20 6		
„ 18	11 14	+1·57	+1·39	16 49 40	196 54 40	0		S.	18·18	0 21 38	18·03	0 20 22
„ 25	11 49	+1·56	+1·46	16 46 40	196 54 0	7W	0·73	N.	17·89	0 19 21		
AUG. 1	11 25	+1·56	+1·46	16 48 10	196 54 30	0		S.	18·00	0 20 13		
„ 8	12 0	+1·54	+1·57	16 46 50	196 53 47	7W	0·72	N.	17·94	0 19 36		
„ 15	11 17	+1·52	+1·55	16 47 0	196 53 40	0		S.	17·94	0 19 45	17·95	0 19 40
„ 22	12 17	+1·55	+1·42	16 46 30	196 53 20	7W	0·81	N.	18·00	0 19 53		
„ 30	11 25	+1·52	+1·25	16 45 50	196 53 40	0		S.	17·88	0 18 54		
SEPT. 6	11 49	+1·45	+1·59	16 46 0	196 53 40	10W	0·79	N.	17·83	0 18 48		
„ 12	11 16	+1·52	+1·42	16 45 30	196 53 30	0		S.	17·82	0 18 33	17·89	0 19 8
„ 20	11 54	+1·52	+1·42	16 46 40	196 53 50	0		N.	17·94	0 19 23		
„ 26	11 27	+1·52	+1·47	16 47 20	196 54 0	0		S.	17·97	0 19 49		
OCT. 3	11 57	+1·55	+1·49	16 46 20	196 53 45	0		N.	17·89	0 19 5		
„ 10	11 23	+1·54	+1·42	16 48 17	196 53 50	0		S.	18·12	0 21 1		
„ 17	10 38	+1·52	+1·44	16 48 0	196 53 30	0		S.	18·13	0 21 2	18·02	0 20 15
„ 24	11 3	+1·52	+1·44	16 47 20	196 53 40	0		S.	18·00	0 20 12		
„ 31	11 43	+1·55	+1·42	16 46 40	196 53 37	15W	0·70	N.	17·96	0 19 53		
NOV. 7	11 23	+1·55	+1·42	16 48 20	196 53 32	0		S.B.B.	18·10	0 21 22		
„ 15	11 56	+1·52	+1·39	16 48 10	196 53 57	0		N.	18·08	0 20 47	18·08	0 21 9
„ 21	11 22	+1·52	+1·44	16 47 50	196 53 27	0		S.B.B.	18·09	0 20 55		
„ 28	11 47	+1·52	+1·44	16 50 40	196 55 40	0		N.	18·04	0 21 32		
DEC. 5	11 11	+1·57	+1·40	16 49 20	196 55 30	7W	0·80	S.	18·00	0 20 36		
„ 12	11 56	+1·52	+1·51	16 51 10	196 56 10	0		N.	18·09	0 21 26	18·08	0 21 12
„ 19	11 5	+1·55	+1·47	16 50 20	196 56 30	15W	0·79	S.	18·02	0 20 40		
„ 26	11 15	+1·55	+1·35	16 51 40	196 56 15	0		S.B.B	18·22	0 22 5		

The Mean Declination for the year 1901 = 0 20 56

Absolute Magnetical Observations.—Table III.

OBSERVATIONS OF INCLINATION, 1901.

Taken with Barrow's Dip Circle, with Microscopes, No. 49 and two 3½-inch Needles, Nos. 1 and 2, by Dover, Charlton.

1901. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
JAN. 1	11 45	13 7	S.	1	21 49·1	21 25·5	21 23·9	21 6·9	21 26·3		
„ 4	14 15	15 40	S.	2	21 39·7	21 27·7	21 25·4	21 14·5	21 26·8	No. 1	
„ 8	11 57	13 28	S.B.B.	2	21 39·9	21 26·5	21 28·4	21 9·2	21 26·0	° ′	
„ 11	14 20	15 55	S.B.B.	1	21 48·1	21 27·4	21 19·4	21 11·1	21 26·5	21 26·4	
„ 15	11 55	13 18	S.	1	21 49·7	21 30·5	21 17·5	21 5·0	21 25·7		21 26·4
„ 18	14 25	15 57	S.	2	21 40·5	21 31·4	21 24·9	21 10·0	21 26·7	No. 2	
„ 22	12 5	13 31	N.	2	21 44·4	21 19·0	21 27·4	21 14·2	21 26·2	° ′	
„ 25	14 39	16 5	N.	1	21 47·0	21 33·5	21 19·7	21 9·2	21 27·3	21 26·4	
„ 29	11 10	12 25	S.B.B.	1	21 51·0	21 31·0	21 18·5	21 5·2	21 26·4		
FEB. 1	14 35	15 50	S.B.B.	2	21 40·0	21 31·6	21 27·0	21 13·2	21 27·9		
„ 5	12 0	13 29	N.	2	21 37·5	21 27·0	21 24·4	21 16·1	21 26·2	No. 1	
„ 8	14 30	16 0	N.	1	21 49·6	21 38·4	21 15·4	21 9·6	21 28·2	° ′	
„ 12	12 0	13 15	S.B.B.	1	21 46·5	21 27·1	21 21·1	21 4·9	21 24·9	21 26·6	
„ 15	14 0	15 15	S.B.B.	2	21 39·1	21 28·0	21 26·1	21 15·5	21 27·2		21 26·6
„ 19	12 2	13 27	N.	2	21 33·4	21 28·1	21 24·2	21 16·6	21 25·6	No. 2	
„ 22	14 20	15 50	N.	1	21 44·0	21 33·4	21 18·4	21 8·6	21 26·1	° ′	
„ 26	11 52	13 16	S.	1	21 47·9	21 29·9	21 20·7	21 10·0	21 27·1	21 26·7	
MAR. 1	14 32	15 52	S.	2	21 42·4	21 28·9	21 26·0	21 13·1	21 27·6		
„ 6	11 53	13 26	N.	2	21 35·4	21 26·2	21 25·1	21 14·0	21 25·2	No. 1	
„ 8	14 35	16 0	N.	1	21 46·2	21 36·2	21 19·6	21 12·6	21 28·6	° ′	
„ 12	11 50	13 5	S.B.B	1	21 44·7	21 32·2	21 18·1	21 9·7	21 26·2	21 27·9	
„ 15	14 39	16 2	N.	2	21 38·9	21 30·7	21 25·5	21 19·0	21 28·5		21 27·5
„ 19	11 58	13 24	N.	2	21 34·9	21 27·5	21 24·5	21 17·6	21 26·1	No. 2	
„ 22	14 39	16 0	N.	1	21 44·7	21 38·1	21 20·9	21 11·0	21 28·7	° ′	
„ 26	11 40	12 50	S.B.B.	1	21 48·1	21 33·9	21 21·1	21 9·7	21 28·2	21 27·1	
„ 29	13 50	15 5	S.B.B.	2	21 36·5	21 28·4	21 29·4	21 18·1	21 28·1		
APR. 2	12 0	13 29	N.	2	21 38·1	21 24·7	21 23·2	21 15·2	21 25·3		
„ 5	14 19	15 48	N.	1	21 45·1	21 35·7	21 21·7	21 11·4	21 28·5	No. 1	
„ 9	11 55	13 18	N.	1	21 40·4	21 31·6	21 28·2	21 9·7	21 27·5	° ′	
„ 12	14 15	15 30	S.B.B.	2	21 39·6	21 26·1	21 24·6	21 16·5	21 26·7	21 27·7	
„ 16	11 55	13 22	N.	2	21 36·6	21 29·6	21 24·0	21 19·2	21 27·3		21 27·4
„ 19	14 19	15 47	N.	1	21 47·0	21 36·4	21 20·4	21 8·7	21 28·1	No. 2	
„ 23	11 50	13 5	S.B.B.	1	21 46·9	21 32·2	21 19·6	21 9·0	21 26·9	° ′	
„ 26	14 20	15 45	S.B.B.	2	21 37·7	21 33·0	21 25·2	21 19·9	21 28·9	21 27·1	
„ 30	12 0	13 31	N.	2	21 37·2	21 29·7	21 26·5	21 16·5	21 27·5		

1901. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
MAY 3	14 10	15 36	N.	1	21 46·2	21 36·0	21 24·9	21 13·1	21 30·0		
„ 7	11 55	13 38	S.	1	21 45·0	21 34·7	21 21·2	21 8·5	21 27·3	No. 1	
„ 10	14 0	15 15	S.B.B.	2	21 38·5	21 27·1	21 27·0	21 15·9	21 27·1	21 28·8	
„ 14	12 2	13 35	N.	2	21 43·2	21 26·4	21 28·4	21 17·1	21 28·8		
„ 17	14 24	15 52	N.	1	21 43·7	21 39·6	21 23·4	21 14·1	21 30·2		21 28·5
„ 21	11 55	13 5	S.B.B.	1	21 41·6	21 32·6	21 21·2	21 8·6	21 26·0		
„ 25	14 15	15 30	S.B.B.	2	21 43·9	21 27·1	21 29·1	21 15·5	21 28·9	No. 2	
„ 28	11 51	13 15	N.	2	21 41·6	21 29·5	21 20·9	21 17·5	21 27·4	21 28·0	
„ 31	14 50	16 16	N.	1	21 56·5	21 29·5	21 22·6	21 13·6	21 30·5		
JUNE 4	12 1	13 22	S.	1	21 46·0	21 34·0	21 18·5	21 10·1	21 27·1		
„ 7	14 42	16 16	N.	2	21 45·0	21 31·1	21 28·2	21 18·7	21 30·7	No. 1	
„ 11	12 2	13 30	N.	2	21 40·1	21 24·6	21 28·6	21 16·2	21 27·4	21 28·9	
„ 14	14 23	15 49	N.	1	21 50·0	21 34·0	21 25·1	21 10·5	21 29·9		
„ 18	11 42	13 4	S.	1	21 46·2	21 34·9	21 22·2	21 9·7	21 28·2		21 29·2
„ 21	14 35	15 58	S.	2	21 40·0	21 36·6	21 26·0	21 20·0	21 30·6	No. 2	
„ 25	11 53	13 36	N.	2	21 49·9	21 26·9	21 27·7	21 14·0	21 29·6	21 29·6	
„ 28	14 38	16 0	N.	1	21 51·1	21 34·2	21 23·6	21 13·0	21 30·5		
JULY 2	11 42	13 6	S.	1	21 49·0	21 32·2	21 20·5	21 13·2	21 28·7		
„ 5	14 22	15 42	S.	2	21 43·5	21 32·0	21 28·7	21 20·5	21 31·2	No. 1	
„ 9	12 9	13 34	N.	2	21 38·5	21 27·0	21 28·1	21 14·6	21 27·0	21 30·3	
„ 12	14 10	15 42	N.	1	21 46·1	21 34·7	21 25·0	21 21·9	21 31·9		
„ 16	11 49	13 15	S.	1	21 48·2	21 34·5	21 21·4	21 13·2	21 29·3		21 30·1
„ 19	14 39	15 56	S.	2	21 47·2	21 35·0	21 26·6	21 19·7	21 32·1		
„ 23	12 2	13 30	N.	2	21 44·9	21 22·6	21 35·5	21 13·0	21 29·0	No. 2	
„ 26	14 43	16 5	N.	1	21 50·4	21 33·1	21 29·4	21 13·1	21 31·5	21 29·8	
„ 30	11 41	13 2	S.	1	21 48·9	21 34·1	21 25·0	21 11·7	21 29·9		
AUG. 2	14 21	15 40	S.	2	21 46·4	21 33·0	21 27·5	21 18·5	21 31·3		
„ 6	12 11	13 34	N.	2	21 49·1	21 24·5	21 41·1	21 10·6	21 31·3	No. 1	
„ 9	14 32	15 58	N.	1	21 49·7	21 32·5	21 28·9	21 13·0	21 31·0	21 31·2	
„ 13	11 40	13 2	S.	1	21 50·6	21 35·7	21 23·5	21 12·2	21 30·5		
„ 16	14 31	15 49	S.	2	21 48·2	21 34·7	21 28·7	21 18·5	21 32·5		21 31·4
„ 20	12 52	14 27	N.	2	21 41·9	21 26·0	21 33·7	21 17·1	21 29·7	No. 2	
„ 23	14 52	16 20	N.	1	21 49·7	21 34·6	21 29·2	21 14·9	21 32·1	21 31·6	
„ 27	11 54	13 24	S.	1	21 50·1	21 34·9	21 25·4	21 14·6	21 31·2		
„ 30	14 25	15 50	S.	2	21 45·7	21 28·6	21 33·0	21 24·6	21 33·0		

1901. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
SEPT. 3	12 25	13 48	N.	2	21 39·6	21 27·7	21 30·7	21 17·5	21 28·9		
„ 6	14 46	16 13	N.	1	21 51·0	21 35·7	21 27·5	21 16·5	21 32·7	No. 1	
„ 10	11 40	13 5	S.	1	21 48·7	21 37·7	21 23·6	21 14·4	21 31·1	° ′ 21 31·6	
„ 13	14 21	15 44	S.	2	21 43·0	21 35·4	21 33·6	21 22·2	21 33·5		21 31·6
„ 17	12 24	13 47	N.	2	21 39·5	21 31·4	21 32·9	21 22·4	21 31·5		
„ 20	14 28	15 49	N.	1	21 49·6	21 36·0	21 26·9	21 16·6	21 32·3	No. 2	
„ 24	11 32	13 3	S.	1	21 47·7	21 34·5	21 25·1	21 14·4	21 30·4	° ′ 21 31·6	
„ 27	14 29	15 52	S.	2	21 40·0	21 33·0	21 34·7	21 22·9	21 32·6		
OCT. 1	12 22	13 48	N.	2	21 28·7	21 16·6	21 42·0	21 29·6	21 29·2		
„ 4	14 25	15 40	S.B.B.	1	21 50·5	21 37·0	21 26·5	21 15·6	21 32·4	No. 1	
„ 8	12 40	14 5	S.	1	22 11·6	22 0·5	21 4·9	20 51·9	21 32·2	° ′ 21 31·7	
„ 11	14 23	15 42	S.	2	21 41·6	21 24·9	21 33·5	21 29·9	21 32·5		
„ 15	11 25	12 40	S.B.B.	2	21 39·1	21 27·6	21 38·0	21 25·6	21 32·6		21 31·8
„ 18	14 45	16 20	N.	1	22 14·5	22 7·6	20 56·2	20 47·0	21 31·3	No. 2	
„ 21	13 20	14 35	S.B.B.	1	22 10·9	22 8·7	20 59·4	20 45·6	21 31·1	° ′ 21 31·9	
„ 25	14 20	15 50	S.	2	21 39·2	21 25·9	21 37·7	21 27·4	21 32·5		
„ 29	12 3	13 36	N.	2	21 42·2	21 30·1	21 39·9	21 18·4	21 32·6		
NOV. 1	14 22	15 46	N.	1	22 18·0	22 7·7	21 4·1	20 38·2	21 32·0		
„ 5	11 50	13 5	S.B.B.	1	22 16·2	22 8·6	21 4·2	20 38·7	21 31·9		
„ 8	14 30	15 45	S.B.B.	2	21 47·2	21 29·9	21 35·5	21 18·9	21 32·9	No. 1	
„ 13	11 57	13 21	N.	2	21 51·1	21 32·7	21 27·9	21 13·7	21 31·3	° ′ 21 32·5	
„ 15	14 50	16 17	N.	1	22 21·5	22 10·4	21 2·0	20 39·0	21 33·2		21 32·4
„ 19	11 50	13 5	S.B.B.	1	22 21·1	22 7·6	21 3·2	20 36·7	21 32·1		
„ 22	14 30	15 45	S.B.B.	2	21 50·7	21 34·2	21 26·9	21 13·0	21 31·2	No. 2	
„ 26	12 3	13 30	N.	2	21 52·0	21 44·5	21 25·7	21 10·7	21 33·2	° ′ 21 32·1	
„ 29	14 34	15 58	N.	1	22 22·6	22 12·7	20 55·0	20 43·7	21 33·5		
DEC. 3	11 49	13 2	S.	1	22 26·2	22 14·9	20 54·5	20 42·5	21 34·5		
„ 6	14 25	15 55	S.	2	21 55·5	21 43·2	21 27·7	21 7·1	21 33·4	No. 1	
„ 10	11 50	13 14	N.	2	21 55·2	21 45·4	21 27·2	21 10·1	21 34·5	° ′ 21 33·7	
„ 13	14 50	16 5	S.B.B.	1	22 24·0	22 10·0	20 55·1	20 42·1	21 32·8		21 33·7
„ 17	12 5	13 20	S.B.B.	1	22 29·5	22 15·1	20 52·2	20 39·0	21 33·9		
„ 20	15 15	16 30	S.B.B.	2	21 55·9	21 42·6	21 28·1	21 7·7	21 33·6	No. 2	
„ 24	11 30	12 45	S.B.B.	2	21 54·7	21 43·7	21 26·7	21 8·4	21 33·4	° ′ 21 33·7	
„ 27	14 10	15 20	S.B.B.	1	22 25·1	22 10·1	20 56·5	20 42·7	21 33·6		

The Mean Dip for the year ... { With Needle No. 1 = ° ′ 21 29·8 ; With Needle No. 2 = 21 29·6 }

The Mean Dip for the year 1901 = ° ′ 21 29·7

Absolute Magnetical Observations—Table III*a*.

SUPPLEMENTARY OBSERVATIONS OF INCLINATION, 1901.

Taken with Barrow's Dip Circle, with Microscopes, No. 49 and two 3½-inch Needles, Nos. 1 and 2, by Dover.

1901. Date.	Bombay Civil Time (0 to 24 hours.) At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
JAN. 1	11 0	13 51	S.	2	21 23·2	21 4·7	21 49·5	21 25·6	21 25·7		
„ 4	13 30	16 30	S.	1	21 16·6	21 8·6	21 50·6	21 31·7	21 26·9	No. 1	
„ 8	11 4	14 16	S.B.B.	1	21 23·2	21 7·4	21 46·9	21 28·0	21 26·4	° ′	
„ 11	13 30	16 40	S.B.B.	2	21 22·6	21 4·4	21 47·1	21 27·9	21 25·5	21 25·9	
„ 15	11 10	14 3	S.	2	21 23·5	21 3·2	21 45·4	21 29·5	21 25·4		21 25·7
„ 18	13 40	16 43	S.	1	21 22·0	21 7·0	21 44·9	21 29·7	21 25·9		
„ 22	11 21	14 17	N.	1	21 21·5	21 5·5	21 47·9	21 23·2	21 24·5	No. 2	
„ 25	14 0	16 46	N.	2	21 22·2	20 59·0	21 49·1	21 28·6	21 24·7	° ′	
„ 29	10 25	13 5	S.B.B.	2	21 24·0	21 4·1	21 49·0	21 29·4	21 26·6	21 25·6	
FEB. 1	13 50	16 30	S.B.B.	1	21 22·0	21 6·6	21 45·0	21 30·6	21 26·0		
„ 5	11 12	14 8	N.	1	21 15·0	21 8·6	21 50·4	21 25·1	21 24·8	No. 1	
„ 8	13 50	16 42	N.	2	21 21·0	21 4·5	21 51·6	21 30·6	21 26·9	° ′	
„ 12	11 15	13 50	S.B.B.	2	21 22·9	21 2·1	21 43·1	21 26·2	21 23·6	21 25·5	
„ 15	13 15	15 55	S.B.B.	1	21 22·2	21 8·5	21 50·4	21 25·2	21 26·6		21 25·8
„ 19	11 17	14 10	N.	1	21 18·6	21 11·6	21 42·0	21 26·0	21 24·5	No. 2	
„ 22	13 35	16 32	N.	2	21 17·7	20 59·5	21 56·1	21 34·2	21 26·9	° ′	
„ 26	11 8	14 2	S.	2	21 22·5	21 4·5	21 51·5	21 29·0	21 26·9	21 26·1	
MAR. 1	13 50	16 37	S.	1	21 17·5	21 9·7	21 48·7	21 28·7	21 26·1		
„ 6	11 9	14 2	N.	1	21 33·7	20 55·2	22 11·5	21 10·1	21 27·6	No. 1	
„ 8	13 54	16 42	N.	2	21 20·1	20 56·4	21 55·7	21 37·0	21 27·3	° ′	
„ 12	11 15	13 45	S.B.B.	2	21 18·0	20 55·9	21 53·7	21 36·6	21 26·0	21 27·4	
„ 15	13 59	16 44	N.	1	21 20·6	21 13·7	21 47·9	21 26·4	21 27·1		21 27·3
„ 19	11 15	14 9	N.	1	21 19·5	21 12·0	21 51·7	21 29·0	21 28·0	No. 2	
„ 22	13 56	16 41	N.	2	21 20·4	20 58·7	21 59·9	21 36·5	21 28·9	° ′	
„ 26	11 0	13 25	S.B.B.	2	21 20·0	20 59·0	21 53·9	21 33·7	21 26·6	21 27·2	
„ 29	13 10	15 40	S.B.B.	1	21 19·9	21 7·1	21 56·1	21 29·0	21 28·0		
APR. 2	11 18	14 10	N.	1	21 24·4	21 6·5	21 53·0	21 25·1	21 27·2		
„ 5	13 35	16 30	N.	2	21 21·0	20 55·7	22 3·7	21 35·7	21 29·0	No. 1	
„ 9	11 10	14 0	N.	2	21 22·0	20 54·5	22 1·6	21 38·2	21 29·1	° ′	
„ 12	13 35	16 10	S.B.B.	1	21 25·9	21 7·1	21 52·6	21 24·9	21 27·6	21 28·1	
„ 16	11 14	14 15	N.	1	21 23·2	21 9·4	21 53·6	21 29·0	21 28·8		21 27·9
„ 19	13 38	16 30	N.	2	21 19·6	20 51·2	22 1·6	21 33·9	21 26·6	No. 2	
„ 23	11 10	13 45	S.B.B.	2	21 19·2	20 56·1	21 56·2	21 32·0	21 25·9	° ′	
„ 26	13 40	16 35	S.B.B.	1	21 23·6	21 10·1	21 53·5	21 29·2	21 29·1	21 27·6	
„ 30	11 19	14 15	N.	1	21 24·2	21 7·4	21 55·7	21 23·0	21 27·6		

1901. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
MAY. 3	13 30	16 25	N.	2	21 24·0	20 49·4	22 3·7	21 35·2	21 28·1		
„ 7	11 12	14 21	S.	2	21 20·7	20 57·9	21 59·0	21 36·2	21 28·4	No. 1. ° ′	
„ 10	13 20	16 0	S.B.B.	1	21 24·1	21 6·1	21 56·5	21 23·6	21 27·6	21 27·7	
„ 14	11 20	14 18	N.	1	21 32·5	21 2·9	21 51·9	21 24·1	21 27·8		
„ 17	13 40	16 39	N.	2	21 23·2	20 50·2	22 5·2	21 35·5	21 28·5		21 27·9
„ 21	11 10	13 45	S.B.B.	2	21 22·9	20 50·4	21 59·1	21 36·4	21 27·2		
„ 25	13 30	16 5	S.B.B.	1	21 30·2	21 4·2	21 52·1	21 24·2	21 27·7	No. 2. ° ′	
„ 28	11 23	13 56	N.	1	21 26·1	21 7·2	21 45·9	21 32·5	21 27·9	21 28·0	
„ 31	14 5	16 57	N.	2	21 19·8	20 53·7	22 2·9	21 34·0	21 27·6		
JUNE. 4	11 20	14 8	S.	2	21 19·4	20 51·9	22 3·7	21 41·7	21 28·4		
„ 7	14 0	16 58	N.	1	21 28·2	21 8·5	21 59·2	21 26·6	21 30·6	No. 1. ° ′	
„ 11	11 19	14 14	N.	1	21 28·9	21 5·5	21 56·4	21 23·7	21 28·6	21 29·9	
„ 14	13 42	16 35	N.	2	21 23·4	20 50·7	22 6·7	21 33·5	21 28·6		
„ 18	11 0	13 48	S.	2	21 23·5	20 58·2	21 57·5	21 32·7	21 28·0		21 29·2
„ 21	13 49	16 43	S.	1	21 26·0	21 11·4	22 0·5	21 27·5	21 31·3	No. 2. ° ′	
„ 25	11 12	14 20	N.	1	21 25·6	21 8·1	21 58·9	21 24·7	21 29·3	21 28·4	
„ 28	13 55	16 40	N.	2	21 23·1	20 49·1	22 4·9	21 37·0	21 28·5		
JULY. 2	11 0	13 53	S.	2	21 22·0	20 55·0	22 2·5	21 40·0	21 29·9		
„ 5	13 37	16 21	S.	1	21 20·2	21 11·2	22 1·4	21 28·6	21 30·3	No. 1 ° ′	
„ 9	11 26	14 16	N.	1	21 25·5	21 1·5	22 1·9	21 23·6	21 28·1	21 30·3	
„ 12	13 29	16 25	N.	2	21 26·0	20 52·7	22 5·0	21 37·0	21 30·2		
„ 16	11 5	14 1	S.	2	21 24·0	20 57·2	22 5·6	21 36·0	21 30·7		21 30·3
„ 19	13 57	16 39	S.	1	21 26·4	21 6·6	22 4·5	21 26·9	21 31·1		
„ 23	11 20	14 14	N.	1	21 28·2	21 4·9	22 11·5	21 22·9	21 31·9	No. 2 ° ′	
„ 26	14 3	16 44	N.	2	21 28·4	20 49·2	22 7·1	21 34·5	21 29·8	21 30·2	
„ 30	10 58	13 43	S.	2	21 22·5	20 58·1	22 4·9	21 36·2	21 30·4		
AUG. 2	13 39	16 21	S.	1	21 27·7	21 5·9	22 4·2	21 26·2	21 31·0		
„ 6	11 28	14 21	N.	1	21 36·6	20 59·1	22 4·6	21 27·7	21 32·0	No. 1 ° ′	
„ 9	13 51	16 39	N.	2	21 26·6	20 46·7	22 8·6	21 33·6	21 28·9	21 32·0	
„ 13	10 55	13 42	S.	2	21 24·6	20 50·7	22 4·7	21 37·7	21 29·4		
„ 16	13 50	16 33	S.	1	21 39·6	21 2·6	22 2·0	21 28·6	21 33·2		21 30·8
„ 20	11 45	15 14	N.	1	21 35·9	21 2·0	21 58·7	21 24·0	21 30·1		
„ 23	14 0	17 5	N.	2	21 28·7	20 49·7	22 11·6	21 30·1	21 30·0	No. 2 ° ′	
„ 27	11 5	14 12	S.	2	21 24·4	20 48·7	22 10·0	21 34·4	21 29·4	21 29·4	
„ 30	13 35	16 33	S.	1	21 36·6	21 8·2	21 59·2	21 30·5	21 33·6		

1901. Date.	Bombay Civil Time (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
SEPT. 3	11 40	14 30	N.	1	21 31·0	21 3·2	22 0·6	21 20·4	21 28·8		
„ 6	14 1.	16 52	N.	2	21 26·0	20 51·9	22 8·4	21 37·1	21 30·8	No. 1	
„ 10	10 55	13 46	S.	2	21 24·4	20 55·7	22 8·5	21 35·1	21 30·9	° ′ 21 31·4	
„ 13	13 38	16 31	S.	1	21 29·0	21 12·0	22 0·1	21 30·7	21 32·9		
„ 17	11 42	14 28	N.	1	21 27·0	21 11·6	21 59·1	21 27·9	21 31·4		21 31·0
„ 20	13 48	16 32	N.	2	21 25·2	20 53·2	22 6·1	21 38·0	21 30·6	No. 2	
„ 24	10 50	13 46	S.	2	21 26·5	20 52·6	22 7·4	21 34·9	21 30·3	° ′ 21 30·6	
„ 27	13 45	16 37	S.	1	21 32·5	21 9·5	21 59·6	21 29·2	21 32·7		
OCT. 1	11 38	14 31	N.	1	21 26·4	21 9·7	22 15·9	21 15·6	21 31·9		
„ 4	13 45	16 30	S.B.B.	2	21 28·9	20 52·4	22 5·9	21 37·2	21 31·1	No. 1	
„ 8	11 15	14 46	S.	2	21 27·1	20 55·0	22 0·9	21 47·5	21 32·6	° ′ 21 32·3	
„ 11	13 41	16 25	S.	1	21 26·1	21 13.6	21 58·5	21 33·2	21 32·8		
„ 15	10 45	13 25	S.B.B.	1	21 32·2	21 8·5	22 5·7	21 23·5	21 32·5		21 31·6
„ 18	14 2	17 0	N.	2	21 26·6	20 53·5	22 1·0	21 39·7	21 30·2		
„ 22	12 40	15 20	S.B.B.	2	21 27·7	20 55·0	21 54·6	21 39·0	21 29·1	No. 2	
„ 25	13 40	16 30	S.	1	21 29·4	21 11·7	21 58·0	21 32·5	21 32·9	° ′ 21 30·7	
„ 29	11 20	14 20	N.	1	21 28·9	21 13·1	22 1·4	21 21·4	21 31·2		
NOV. 1	13 44	16 30	N.	2	21 28·0	20 50·5	22 17·5	21 32·6	21 32·1		
„ 5	11 10	13 40	S.B.B.	2	21 27·7	20 50·9	22 18·0	21 33·5	21 32·5	No. 1	
„ 8	13 45	16 30	S.B.B.	1	21 30·6	21 14·4	21 59·7	21 22·0	21 31·7	° ′ 21 31·1	
„ 13	11 16	14 5	N.	1	21 32·6	21 3·2	22 3·4	21 22·4	21 30·4		
„ 15	14 8	16 53	N.	2	21 28·2	20 53·2	22 10·0	21 36·5	21 32·0		21 31·6
„ 19	11 5	13 50	S.B.B.	2	21 26·7	20 50·1	22 9·7	21 36·4	21 30·7		
„ 22	13 50	16 25	S.B.B.	1	21 32·4	21 3·4	22 3·1	21 22·5	21 30·3	No. 2	
„ 26	11 20	14 16	N.	1	21 32·2	21 6·6	22 8·2	21 21·5	21 32·1	° ′ 21 31·9	
„ 29	13 54	16 39	N.	2	21 28·4	20 51·4	22 9·9	21 39·6	21 32·3		
DEC. 3	11 3	13 48	S.	2	21 32·5	20 48·0	22 13·7	21 40·4	21 33·6		
„ 6	13 38	16 41	S.	1	21 31·2	21 11·4	22 6·4	21 21·9	21 32·7	No. 1	
„ 10	11 9	13 56	N.	1	21 33·0	21 6·7	22 4·4	21 26·2	21 32·6	° ′ 21 32·4	
„ 13	14 10	16 45	S.B.B.	2	21 28·1	20 53·9	22 8·6	21 39·1	21 32·4		21 32·7
„ 17	11 20	14 0	S.B.B.	2	21 27·6	20 52·5	22 14·4	21 38·0	21 33·1		
„ 20	14 40	17 10	S.B.B.	1	21 31·2	21 11·5	22 6·5	21 22·2	21 32·8	No. 2	
„ 24	10 50	13 25	S.B.B.	1	21 33·2	21 7·2	22 1·9	21 24·2	21 31·6	° ′ 21 32·9	
„ 27	13 30	15 55	S.B.B.	2	21 28·0	20 54·2	22 9·5	21 39·2	21 32·7		

The Mean Dip for the year ... { With Needle No. 1 = 21 29·5 / With Needle No. 2 = 21 29·0

The Mean Dip for the year 1901 = 21 29·3

Absolute Magnetical Observations—Table III *b*.

SUPPLEMENTARY OBSERVATIONS OF INCLINATION, 1901.

Taken with New (Dover, Charlton's) Dip Circle, with Microscopes, No. 110 and two 3½-inch Needles, Nos. 1 and 2, by Dover.

1901. Date.	Bombay Civil Time (0 to 24 hours.) At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
JAN. 1	14 20	15 42	S.	1	21 22·4	21 13·3	21 35·7	21 32·1	21 25·9	No. 1 ° ′ 21 25·5	21 25·1
,, 8	14 38	15 50	S.B.B.	2	21 21·1	21 10·7	21 39·5	21 24·7	21 24·0		
,, 15	14 22	15 44	S.	1	21 14·9	21 13·1	21 32·8	21 38·0	21 24·7	No. 2 ° ′ 21 24·5	
,, 22	14 33	15 46	N.	2	21 19·8	21 10·4	21 39·1	21 30·6	21 25·0		
,, 29	13 30	14 45	S.B.B.	1	21 17·9	21 14·9	21 35·5	21 35·0	21 25·8		
FEB. 5	14 20	15 32	N.	2	21 20·4	21 12·9	21 39·1	21 35·2	21 26·9	No. 1 ° ′ 21 27·3	21 27·2
,, 12	14 15	15 30	S.B.B.	1	21 20·1	21 15·6	21 39·9	21 36·0	21 27·9		
,, 19	14 26	15 38	N.	2	21 17·0	21 6·3	21 49·5	21 35·5	21 27·1	No. 2 ° ′ 21 27·0	
,, 26	14 25	15 45	S.	1	21 18·5	21 13·6	21 36·7	21 38·3	21 26·8		
MAR. 6	14 14	15 35	N.	2	21 17·0	21 3·1	21 53·5	21 37·6	21 27·8	No. 1 ° ′ 21 26·5	21 27·2
,, 12	14 0	15 15	S.B.B.	1	21 19·1	21 13·0	21 36·1	21 37·0	21 26·3		
,, 19	14 26	15 38	N.	2	21 16·1	21 5·9	21 51·2	21 38·7	21 28·0	No. 2 ° ′ 21 27·9	
,, 26	14 10	15 25	S.B.B.	1	21 19·2	21 13·4	21 37·4	21 36·9	21 26·7		
APRIL 2	14 25	15 35	N.	2	21 16·1	21 4·3	21 50·7	21 41·7	21 28·2	No. 1 ° ′ 21 26·7	21 27·4
,, 9	14 12	15 24	N.	1	21 28·2	21 9·7	21 43·3	21 28·5	21 27·4		
,, 16	14 29	15 55	N.	2	21 11·4	21 3·6	21 46·7	21 46·1	21 26·9	No. 2 ° ′ 21 27·9	
,, 23	14 30	15 40	S.B.B.	1	21 9·2	21 7·5	21 44·0	21 43·6	21 26·1		
,, 30	14 26	15 41	N.	2	21 10·6	21 4·3	22 0·9	21 38·3	21 28·5		
MAY 7	14 50	16 17	S.	1	21 24·2	21 10·7	21 42·1	21 32·6	21 27·4	No. 1 ° ′ 21 27·1	21 27·8
,, 14	14 30	15 39	N.	2	21 12·8	21 18·7	21 33·3	21 50·7	21 28·9		
,, 21	14 45	16 5	S.B.B.	1	21 23·7	21 12·1	21 38·0	21 33·9	21 26·9	No. 2 ° ′ 21 28·5	
,, 28	14 13	15 26	N.	2	21 14·1	21 3·2	21 54·2	21 41·5	21 28·2		
JUNE 4	14 25	15 50	S.	1	21 25·2	21 12·4	21 43·6	21 35·2	21 29·1	No. 1 ° ′ 21 29·1	21 28·8
,, 11	14 26	15 40	N.	2	21 13·6	21 3·9	21 58·2	21 40·9	21 29·1		
,, 18	14 25	15 46	S.	1	21 27·4	21 13·0	21 42·4	21 34·2	21 29·2	No. 2 ° ′ 21 28·5	
,, 25	14 32	15 46	N.	2	21 9·4	21 8·7	21 48·6	21 45·2	21 28·0		

1901. Date.	Bombay Civil Time. (0 to 24 hours). At commencement.	At conclusion.	Observer.	Needle marked.	End of Needle Dipping. A. Face of Circle. East.	A. Face of Circle. West.	B. Face of Circle. East.	B. Face of Circle. West.	Mean Dip.	Monthly Mean for each Needle.	Monthly Mean.
	h. m.	h. m.			° ′	° ′	° ′	° ′	° ′		° ′
July 2	14 22	15 40	S.	1	21 27·5	21 13·5	21 43·6	21 33·9	21 29·6	No. 1 ° ′ 21 29·4	21 29·4
„ 9	14 33	15 44	N.	2	21 15·2	21 6·9	21 52·3	21 41·2	21 28·9		
„ 16	14 20	15 32	S.	1	21 25·5	21 14·9	21 44·0	21 34·2	21 29·6	No. 2 ° ′ 21 29·4	
„ 23	14 24	15 34	N.	2	21 16·6	21 6·4	21 53·1	21 43·9	21 30·0		
„ 30	14 25	15 46	S.	1	21 25·2	21 13·9	21 45·2	21 32·2	21 29·1		
Aug. 6	14 37	15 48	N.	2	21 16·3	21 4·9	21 50·0	21 48·8	21 30·0	No. 1 ° ′ 21 31·3	21 30·9
„ 13	14 20	15 40	S.	1	21 25·7	21 15·8	21 45·6	21 37·6	21 31·2		
„ 20	15 36	16 52	N.	2	21 17·4	21 8·2	21 54·1	21 43·9	21 30·9	No. 2 ° ′ 21 30·4	
„ 27	14 50	16 9	S.	1	21 26·4	21 16·7	21 43 9	21 38·9	21 31·5		
Sept. 3	14 45	16 10	N	2	21 15·7	21 6·6	21 50·6	21 47·0	21 30·0	No. 1 ° ′ 21 29·9	21 29·9
„ 10	14 20	15 38	S.	1	21 23·8	21 16·8	21 41·1	21 38·6	21 30·1		
„ 17	14 38	15 52	N.	2	21 17·7	21 2·0	21 54·9	21 44·9	21 29·9	No. 2 ° ′ 21 29·9	
„ 24	14 20	15 40	S.	1	21 23·8	21 16·1	21 41·7	21 37·7	21 29·8		
Oct. 1	14 43	16 10	N.	2	21 15·5	21 7·4	21 52·6	21 48·4	21 31·0	No. 1 ° ′ 21 31·5	21 31·2
„ 8	15 15	16 30	S.	1	21 27·9	21 15·7	21 44·3	21 39·9	21 31·9		
„ 15	14 10	15 30	S.B.B.	2	21 12·9	21 7·1	21 53·6	21 48·6	21 30·5	No. 2 ° ′ 21 30·9	
„ 21	16 0	17 15	S.B.B.	1	21 23·0	21 17·4	21 46·4	21 38·2	21 31·2		
„ 29	14 37	15 53	N.	2	21 15·5	21 12·5	22 0·1	21 36·6	21 31·2		
Nov. 5	14 30	15 50	S.B.B	1	21 23·6	21 17·1	21 46·5	21 39·5	21 31·7	No. 1 ° ′ 21 31·3	21 31·2
„ 13	14 20	15 35	N.	2	21 20·1	21 2·2	21 55·2	21 48·0	21 31·4		
„ 19	14 25	15 45	S.B.B.	1	21 22·6	21 16·5	21 45·2	21 39·2	21 30·9	No. 2 ° ′ 21 31 1	
„ 26	14 27	15 39	N	2	21 15·7	21 5·9	21 51·6	21 50·4	21 30·9		
Dec. 3	14 20	15 40	S.	1	21 26·3	21 16·6	21 46·3	21 38·8	21 32·0	No. 1 ° ′ 21 31·6	21 31·7
„ 10	14 9	15 23	N.	2	21 17·7	21 8·5	21 55·6	21 46·5	21 32·1		
„ 17	14 30	15 45	S.B.B.	1	21 27·1	21 15·1	21 44·0	21 38·6	21 31·2	No. 2 ° ′ 21 31·7	
„ 24	14 0	15 15	S.B.B.	2	21 17·4	21 7·4	21 55·0	21 46·0	21 31·4		

The Mean Dip for the year ... { With Needle No. 1 = ° ′ 21 28·8 ; With Needle No. 2 = 21 29·0

The Mean Dip for the year 1901 = ° ′ 21 28·9

APPENDIX A.

HOURLY MEANS OF DECLINATION, HORIZONTAL FORCE AND VERTICAL FORCE.

(AS DERIVED FROM SELECTED QUIET DAYS)

FOR THE YEARS

1900 and 1901.

While continuing the usual process adopted in this Observatory for obtaining the diurnal variation from all (unrestricted) days of the year, Tables VI to XVII give the results of magnetograph curves standardised by absolute observations on the lines suggested by the Committee of the British Association. The selected quiet days suitable for the determination of diurnal variation for the year 1900 are the same as those selected by the Astronomer Royal. It was carefully noted that the quiet days, as given by the Astronomer Royal, were invariably 'calm' days at Bombay or, in a very few cases, days of 'small' disturbance, and the diurnal variation of the last seven years has therefore been obtained from the quiet days as selected by the Astronomer Royal without any change. Quiet days have, however, now to be selected for the Magnetic Survey of India such as may be adopted over the whole of the Continent of India, and therefore from the year 1901 the selected days have been obtained independently from the Bombay Records. Tables VIII, IX, XII, XIII, XVI and XVII for 1901 have been derived from the Bombay 'quiet days' as given in Table A along with the Disturbance Tables I and II.

TABLE I.—*Dates of Magnetic Disturbances at Colába, Bombay, 1900.*

1900. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	C.	C.	S.	C.	S.	C.	C.	S.	C.	C.	M.	S.
2	S.	C.	S.	C.	C.	C.	C.	C.	C.	C.	S.	S.
3	C.	C.	S.	C.	S.	C.	C.	C.	C.	C.	C.	C.
4	C.	M.	C.	S.	S.	C.	C.	C.	C.	S.	C.	C.
5	M.	S.	C.	S.	G.	S.	S.	C.	S.	C.	C.	C.
6	S.	C.	S.	S.	S.	S.	C.	C.	C.	C.	C.	C.
7	C.	C.	C.	C.	S.	C.	C.	S.	C.	C.	C.	S.
8	C.	S.	M.	C.	C.	S.	C.	S.	C.	S.	C.	C.
9	C.	S.	S.	S.	C.	C.	C.	C.	S.	C.	C.	S.
10	S.	S.	C.	S.	C.	C.	C.	C.	S.	S.	C.	S.
11	S.	S.	C.	C.	C.	C.	C.	C.	C.	C.	C.	C.
12	S.	C.	S.	C.	S.	C.	C.	C.	C.	C.	S.	C.
13	S.	C.	G.	C.	C.	C.	C.	S.	S.	C.	S.	C.
14	S.	S.	S.	C.	C.	C.	C.	C.	C.	C.	S.	S.
15	S.	S.	C.	C.	C.	C.	C.	C.	S.	C.	S.	C.
16	S.	C.	C.	C.	C.	C.	C.	C.	C.	C.	C.	C.
17	S.	S.	C.	S.	C.	C.	C.	C.	C.	C.	S.	C.
18	S.	C.	S.	C.	S.	C.	S.	S.	C.	C.	S.	C.
19	M.	C.	C.	C.	C.	C.	S.	S.	C.	C.	C.	C.
20	M.	S.	C.	C.	C.	C.	S.	S.	C.	S.	S.	C.
21	M.	S.	C.	C.	C.	S.	C.	C.	C.	C.	S.	C.
22	S.	C.	C.	C.	C.	C.	C.	C.	S.	C.	C.	C.
23	S.	S.	C.	S.	C.	C.	C.	C.	C.	S.	S.	C.
24	S.	S.	C.	S.	C.	C.	S.	S.	S.	S.	C.	C.
25	S.	C.	C.	C.	C.	C.	S.	S.	C.	M.	C.	C.
26	M.	S.	C.	C.	C.	C.	C.	C.	C.	S.	C.	S.
27	S.	S.	C.	C.	C.	S.	C.	S.	S.	S.	C.	S.
28	S.	C.	C.	C.	C.	S.	C.	C.	S.	C.	S.	S.
29	C.		S.	S.	S.	S.	C.	C.	S.	C.	S.	C.
30	C.		C.	S.	S.	C.	C.	C.	C.	S.	C.	C.
31	C.		C.		C.		C.	C.		C.		C.
Total C.	9	13	20	20	21	23	25	21	20	21	18	21
Total S.	17	14	9	10	9	7	6	10	10	9	11	10
Total M.	5	1	1	0	0	0	0	0	0	1	1	0
Total G.	0	0	1	0	1	0	0	0	0	0	0	0
Total V.G.	0	0	0	0	0	0	0	0	0	0	0	0

TABLE II.—*Dates of Magnetic Disturbances at Colába, Bombay, 1901.*

1901. Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	S.	C.	C.	S.	C.	S.	C.	C.	C.	C.	C.	M.
2	S.	M.	C.	C.	C.	C.	C.	C.	C.	C.	C.	M.
3	C.	C.	C.	C.	C.	C.	C.	S.	C.	C.	S.	C.
4	S.	C.	C.	C.	C.	C.	S.	C.	C.	S.	C.	C.
5	M.	S.	C.	C.	C.	C.	C.	C.	C.	C.	S.	S.
6	S.	S.	C.	C.	C.	S.	C.	C.	C.	C.	C.	C.
7	S.	S.	C.	S.	C.	S.	C.	S.	C.	S.	S.	S.
8	C.	C.	C.	C.	C.	C.	C.	C.	C.	M.	C.	S.
9	S.	C.	C.	C.	C.	C.	C.	C.	C.	S.	S.	S.
10	C.	C.	C.	S.	M.	S.	C.	C.	M.	S.	C.	S.
11	S.	C.	C.	C.	S.	C.	S.	C.	S.	C.	S.	S.
12	C.	S.	S.	C.	S.	C.	S.	C.	S.	C.	C.	C.
13	C.	S.	S.	S.	C.	S.	C.	C.	C.	S.	C.	C.
14	S.	C.	C.	S.	C.	S.	C.	M.	C.	C.	C.	C.
15	S.	C.	C.	S.	C.	S.	S.	S.	C.	C.	C.	C.
16	C.	C.	S.	C.	C.	C.	S.	C.	S.	S.	S.	C.
17	C.	S.	S.	C.	C.	C.	S.	C.	S.	C.	C.	C.
18	C.	C.	S.	C.	C.	C.	S.	C.	C.	C.	C.	C.
19	C.	S.	C.	C.	C.	C.	S.	C.	C.	C.	S.	C.
20	C.	S.	C.	C.	C.	S.	S.	S.	C.	C.	C.	C.
21	S.	C.	C.	C.	C.	S.	C.	C.	C.	C.	C.	C.
22	M.	M.	C.	S.	C.	C.	C.	C.	S.	C.	C.	C.
23	M.	S.	S.	C.	S.	C.	C.	C.	S.	C.	C.	C.
24	S.	C.	G.	C.	S.	C.	C.	C.	S.	S.	C.	S.
25	C.	C.	C.	C.	S.	C.	C.	C.	C.	S.	S.	C.
26	S.	C.	C.	C.	S.	C.	C.	C.	S.	C.	C.	C.
27	S.	C.	C.	S.	C.	C.	C.	S.	C.	S.	C.	S.
28	C.	C.	C.	C.	C.	C.	C.	C.	C.	S.	C.	M.
29	C.		S.	C.	C.	C.	C.	S.	C.	C.	C.	S.
30	C.		C.	C.	C.	C.	C.	C.	C.	C.	C.	C.
31	C.		C.		M.		C.	S.		C.		C.
Total C.	15	17	24	21	23	21	22	23	21	21	21	19
Total S.	13	9	6	9	6	9	9	7	8	9	9	9
Total M.	3	2	0	0	2	0	0	1	1	1	0	3
Total G.	0	0	1	0	0	0	0	0	0	0	0	0
Total V.G.	0	0	0	0	0	0	0	0	0	0	0	0

The magnitudes of the Disturbances are determined from Horizontal Force traces.

C. = calm ; S. = small ; M. = moderate ; G. = great ; V.G. = very great.

Days are reckoned from 10 A M. to 10 A.M. of the following day.

TABLE A.—*Selected quiet days from the Bombay Record for 1901.*

January	3	10	17	25	29
February	3	9	15	21	27
March	5	10	15	20	28
April	4	9	17	21	29
May	4	9	14	22	28
June	3	9	17	23	28
July	3	10	14	21	29
August	2	9	17	23	28
September	2	7	15	21	29
October	3	11	15	22	29
November	2	8	15	21	29
December	4	12	16	22	26

Tables III, IV and V give the mean Absolute values of Declination, Horizontal Force and Vertical Force, respectively, for the years 1894 to 1901 as determined by several different processes. Tables VI to IX give the hourly means and the diurnal inequality of Declination; Tables X to XIII those of Horizontal Force, and Tables XIV to XVII those of Vertical Force, for the years 1900 and 1901.

ANNUAL MEANS.

TABLE III.—*Declination.*

Description of Processes.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
(1) Yearly mean obtained from selected quiet days by constants determined from month to month ...	39 26	37 5	34 50	32 35	29 42	26 30	24 29	21 53
(2) Yearly mean obtained from all (unrestricted) days by constants determined from month to month.	39 35	37 9	34 55	32 41	29 44	26 32	24 30	21 52
(3) Yearly mean obtained from selected quiet days determined by a single constant	39 26	37 1	35 3	32 24	29 54	26 55	24 35	22 15
(4) Yearly mean obtained from all (unrestricted) days determined by a single constant	39 35	37 6	35 9	32 29	29 56	26 58	24 36	22 14
(5) Yearly mean (Absolute observed reduced to the monthly mean tabulation of Magnetograph) ...	39 34	37 8	34 54	32 40	29 41	26 33	24 31	21 51

TABLE IV.—*Horizontal Force.*

Description of Processes.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
	C.G.S.	C.G.S.	C.G.S.	C.G.S.	C.G.S.	C.G.S.	C.G.S.	C.G.S.
(1) Yearly mean obtained from selected quiet days by constants determined from month to month...	·37413	·37425	·37446	·37449	·37435	·37437	·37440	·37434
(2) Yearly mean obtained from all (unrestricted) days by constants determined from month to month.	·37400	·37418	·37438	·37444	·37431	·37434	·37438	·37434
(3) Yearly mean (Absolute observed reduced to the monthly mean reading of Grubb's)	·37406	·37424	·37441	·37444	·37430	·37434	·37436	·37432
(4) Yearly mean (Absolute observed reduced to the monthly mean tabulation of Magnetograph) ...	·37408	·37427	·37444	·37449	·37436	·37439	·37442	·37439

TABLE V.—*Vertical Force.*

Description of Processes.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
	C.G.S.	C.G.S.	C.G.S.	C.G.S.	C.G.S.	C.G.S.	C.G.S.	C.G.S.
(1) Yearly mean obtained from selected quiet days by constants determined from month to month...	·14114	·14207	·14321	·14364	·14448	·14540	·14652	·14752
(2) Yearly mean obtained from all (unrestricted) days by constants determined from month to month.	·14115	·14208	·14322	·14364	·14448	·14541	·14652	·14752

TABLE VI.—Hourly Means of the Declination as determined from the selected quiet days in 1900.

(*The Mean for the year* = 0° 24′·5 *East.*)

Hours.	Preceding noon.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.	Succeeding noon.
WINTER.																											
1900. Months.	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
January ...	25·4	24·9	24·8	24·7	24·6	24·6	24·5	24·4	24·5	25·6	26·3	25·7	24·6	24·4	24·4	24·6	24·9	25·3	25·1	25·1	25·1	25·1	25·0	25·0	24·9	24·9	23·8
February ...	25·6	25·5	25·4	25·4	25·4	25·3	25·2	25·3	25·3	26·2	26·6	26·5	25·5	25·1	25·3	25·7	25·8	26·0	25·7	25·4	25·4	25·4	25·4	25·5	25·5	25·5	24·9
March ...	24·8	25·8	25·8	25·8	25·7	25·7	25·7	25·9	26·7	27·1	27·1	26·5	25·4	24·6	24·5	25·1	25·8	26·0	26·1	25·9	25·8	25·7	25·8	25·8	25·8	25·8	26·6
October ...	22·2	23·6	24·1	24·1	24·0	23·9	23·9	24·0	24·8	25·2	24·5	23·3	22·5	22·4	22·9	23·6	24·2	24·3	24·0	23·9	23·9	23·9	23·9	24·0	24·1	24·1	22·7
November ...	22·6	23·4	23·3	23·3	23·2	23·0	23·0	22·9	23·0	23·2	23·1	22·8	22·6	22·9	23·5	23·9	23·6	23·4	23·2	23·2	23·2	23·2	23·2	23·2	23·3	23·3	23·1
December ...	23·5	23·6	23·5	23·4	23·6	23·2	23·1	23·1	22·6	22·9	23·2	23·5	23·3	23·3	23·6	24·0	24·0	23·9	23·7	23·7	23·6	23·5	23·5	23·5	23·5	23·5	23·0
Means ...	24·0	24·4	24·5	24·5	24·4	24·3	24·2	24·3	24·5	25·0	25·1	24·7	24·0	23·8	24·0	24·5	24·7	24·8	24·6	24·5	24·5	24·5	24·5	24·5	24·5	24·5	24·0
SUMMER.																											
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
April ...	23·6	25·4	25·4	25·4	25·3	25·2	25·3	25·8	26·7	27·0	26·5	25·6	24·5	23·5	23·6	24·1	24·9	25·7	25·7	25·3	24·9	24·9	25·0	25·1	25·2	25·3	23·3
May ...	22·8	24·9	25·0	24·9	24·9	24·8	25·0	25·9	26·4	26·2	25·2	23·9	22·9	22·4	22·8	23·4	24·1	24·7	25·0	24·7	24·5	24·5	24·6	24·7	24·8	24·9	23·2
June ...	22·5	24·6	24·7	24·7	24·7	24·6	24·9	25·5	25·6	25·5	24·7	23·9	23·3	22·9	23·0	23·2	23·7	24·2	24·2	24·2	24·1	24·1	24·3	24·5	24·7	24·7	23·4
July ...	22·6	24·4	24·5	24·5	24·5	24·6	24·3	25·9	26·5	26·2	25·0	23·8	22·5	21·9	22·0	22·7	23·5	24·2	24·6	24·4	24·0	23·9	23·9	24·1	24·3	24·4	21·7
August ...	22·0	24·3	24·4	24·4	24·5	24·5	24·8	25·8	26·6	26·4	25·2	23·8	22·6	22·0	22·0	22·8	23·7	24·7	24·9	24·5	24·1	24·0	24·1	24·1	24·2	24·3	21·6
September ...	21·0	24·2	24·3	24·4	24·3	24·4	24·6	25·5	26·4	26·0	25·1	23·9	22·5	21·9	22·4	23·3	24·2	24·7	24·7	24·1	23·9	23·9	24·0	24·1	24·2	24·3	21·9
Means ...	22·4	24·7	24·7	24·7	24·7	24·7	24·8	25·7	26·4	26·2	25·3	24·2	23·0	22·4	22·6	23·3	24·0	24·7	24·9	24·5	24·3	24·2	24·3	24·5	24·6	24·6	22·5

TABLE VII.—Diurnal Inequality of the Declination as deduced from Table VI.

Hours.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.
SUMMER MEANS.																									
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
	+0·2	+0·2	+0·2	+0·2	+0·2	+0·3	+1·2	+1·9	+1·7	+0·8	−0·3	−1·4	−2·0	−1·8	−1·2	−0·5	+0·2	+0·4	0·0	−0·2	−0·2	−0·2	0·0	+0·1	+0·2
WINTER MEANS.																									
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
	0·0	0·0	0·0	0·0	−0·2	−0·2	−0·2	0·0	+0·5	+0·7	+0·2	−0·5	−0·7	−0·4	0·0	+0·2	+0·3	+0·2	+0·1	0·0	0·0	0·0	0·0	0·0	0·0
ANNUAL MEANS.																									
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
	+0·1	+0·1	+0·1	+0·1	0·0	0·0	+0·5	+0·9	+1·1	+0·7	0·0	−1·0	−1·4	−1·1	−0·6	−0·1	+0·3	+0·3	0·0	−0·1	−0·1	−0·1	0·0	+0·1	+0·1

Note.—When the sign is + the magnet points to the East of its mean position.

TABLE VIII.—Hourly Means of the Declination, as determined from the selected quiet days in 1901.

(*The Mean for the year* = 0° 21′·9 *East.*)

Hours.	Preceding noon.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.	Succeeding noon
WINTER.																											
1901. Months.	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
January ...	23·2	22·8	22·7	22·4	22·6	22·4	22·4	22·3	22·0	22·7	23·3	23·5	23·1	23·1	23·3	23·3	22·9	22·8	22·9	23·0	23·0	23·0	22·9	22·9	22·9	22·9	22·8
February ...	22·6	22·7	22·7	22·5	22·5	22·4	22·2	22·0	22·1	22·9	23·7	23·8	23·1	22·6	22·7	23·1	23·3	23·1	22·6	22·5	22·5	22·8	22·5	22·5	22·5	22·5	22·2
March ...	21·8	22·8	22·8	22·8	22·7	22·6	22·6	22·7	23·2	23·7	23·6	23·1	22·2	21·8	22·1	22·7	23·4	23·5	23·0	22·6	22·5	22·5	22·5	22·6	22·7	22·7	21·7
October ...	20·4	21·4	21·4	21·3	21·3	21·2	21·0	21·1	21·9	22·2	21·9	21·1	20·2	19·9	20·3	20·9	21·5	21·5	21·1	21·2	21·2	21·2	21·2	21·2	21·3	21·3	20·0
November ...	20·6	20·8	20·8	20·8	20·6	20·5	20·5	20·5	20·6	20·7	20·6	20·3	19·8	20·0	20·5	20·8	20·6	20·8	20·8	20·7	20·7	20·7	20·8	20·8	20·8	20·8	20·3
December ...	21·2	21·3	21·2	21·1	21·0	20·9	20·8	20·6	20·5	20·9	21·4	22·0	22·0	21·9	21·8	21·7	21·5	21·5	21·4	21·4	21·4	21·3	21·4	21·3	21·3	21·3	21·1
Means ...	21·6	22·0	21·9	21·8	21·8	21·7	21·6	21·5	21·7	22·2	22·4	22·3	21·7	21·6	21·8	22·1	22·2	22·2	22·0	21·9	21·9	21·9	21·9	21·9	21·9	21·9	21·4
SUMMER.																											
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
April	19·9	22·1	22·1	22·1	22·0	22·0	22·0	22·4	23·2	23·4	22·9	21·8	20·9	20·2	20·1	20·4	21·3	21·9	22·1	22·0	21·9	21·8	21·9	22·0	22·1	22·1	20·4
May	20·2	22·2	22·2	22·2	22·2	22·1	22·2	23·1	23·9	24·1	23·1	21·6	20·4	20·1	20·3	21·1	21·5	22·0	22·1	22·1	21·9	21·8	21·9	22·0	22·1	22·1	20·5
June	19·1	22·0	22·1	22·1	22·0	22·0	22·3	23·3	23·8	23·8	23·0	21·8	20·6	19·8	20·1	20·4	21·0	21·5	21·7	21·6	21·4	21·5	21·6	21·7	21·8	21·9	19·7
July	19·4	21·7	21·8	21·8	21·8	21·8	22·1	22·8	23·4	23·1	21·9	20·8	19·8	19·4	19·8	20·4	21·0	21·4	21·7	21·7	21·3	21·3	21·3	21·5	21·6	21·7	19·7
August ...	19·9	21·9	21·9	22·0	22·0	22·1	22·4	23·2	23·7	23·6	22·7	21·5	20·4	20·0	20·1	20·7	21·6	22·2	22·3	21·9	21·6	21·6	21·6	21·7	21·8	21·8	18·9
September ...	19·2	22·1	22·2	22·3	22·2	22·2	22·4	23·0	24·0	23·9	22·9	21·5	20·0	19·3	19·6	20·9	22·0	22·7	22·5	22·0	21·8	21·8	21·8	21·9	22·0	22·1	19·0
Means ...	19·6	22·0	22·0	22·1	22·0	22·0	22·2	23·0	23·7	23·7	22·8	21·5	20·3	19·8	20·0	20·6	21·4	21·9	22·1	21·9	21·7	21·6	21·7	21·8	21·9	21·9	19·7

TABLE IX.—Diurnal Inequality of the Declination as deduced from Table VIII.

Hours.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.
SUMMER MEANS.																									
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
	+0·2	+0·2	+0·2	+0·2	+0·2	+0·4	+1·1	+1·8	+1·8	+0·9	−0·3	−1·5	−2·0	−1·8	−1·2	−0·4	+0·1	+0·2	0·0	−0·1	−0·2	−0·1	0·0	0·0	+0·1
WINTER MEANS.																									
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
	0·0	0·0	−0·1	−0·1	−0·2	−0·3	−0·4	−0·2	+0·3	+0·5	+0·4	−0·2	−0·3	−0·1	+0·2	+0·3	+0·3	+0·1	0·0	0·0	0·0	0·0	0·0	0·0	0·0
ANNUAL MEANS.																									
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
	+0·1	+0·1	+0·1	0·0	0·0	0·0	+0·4	+0·8	+1·1	+0·7	0·0	−0·8	−1·2	−1·0	−0·5	−0·1	+0·2	+0·2	0·0	−0·1	−0·1	−0·1	0·0	0·0	+0·1

Note.—When the sign is + the magnet points to the East of its mean position.

TABLE X.—Hourly Means of the Horizontal Force in C. G. S. units (corrected for temperature) as determined from the selected quiet days in 1900.

(*The Mean for the year* = 0·37440.)

Hours.	Preceding noon.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.	Succeeding noon.
	0·37000+																										
														WINTER.													
1900. Months.																											
January ...	459	439	438	439	438	440	442	443	447	449	453	458	462	464	459	452	448	445	441	440	437	437	436	435	438	439	468
February ...	457	432	431	433	432	436	435	437	437	445	453	459	463	461	454	444	439	438	436	434	433	432	433	433	433	435	472
March... ...	447	418	419	418	418	417	419	420	425	436	449	458	460	456	448	440	434	427	425	423	420	419	417	418	419	420	461
October ...	473	437	437	436	436	437	436	438	442	451	463	474	479	476	465	453	446	442	441	439	437	437	436	436	437	437	471
November ...	468	440	441	441	441	441	443	446	454	463	469	473	471	464	455	451	448	446	444	443	443	442	441	442	442	442	465
December ...	465	444	445	446	446	448	448	450	459	466	470	473	446	468	462	457	453	450	449	448	448	448	447	447	446	447	472
Means... ...	461	435	435	435	435	436	437	439	444	452	459	466	463	465	457	449	445	441	439	438	436	436	435	435	436	437	468
														SUMMER.													
April	462	432	432	433	434	434	435	436	439	447	461	469	472	469	464	456	449	444	441	437	436	435	434	435	436	437	477
May	449	419	419	420	420	420	421	423	429	441	453	461	460	455	450	444	437	431	426	421	420	422	422	422	425	425	452
June	463	429	430	429	429	428	428	431	438	443	449	456	460	461	457	448	439	432	429	428	428	429	428	428	428	428	456
July	470	432	432	431	431	432	432	433	439	450	461	472	476	472	467	454	443	435	430	429	429	428	429	429	429	430	478
August... ...	444	416	415	416	417	417	419	420	423	431	441	442	450	447	439	432	427	421	420	419	418	417	418	418	419	420	452
September ...	457	424	424	424	424	425	425	425	428	435	448	459	462	460	455	446	439	433	430	429	427	425	425	425	426	425	455
Means... ...	457	425	425	425	426	426	427	428	433	441	452	460	463	461	455	447	439	433	429	427	426	426	426	426	427	427	462

TABLE XI.—Diurnal Inequality of the Horizontal Force as deduced from Table X.

Hours.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.
													SUMMER MEANS.												
	−·00011	−·00011	−·00011	−·00010	−·00010	−·00009	−·00008	−·00003	+·00005	+·00016	+·00024	+·00027	+·00025	+·00019	+·00011	+·00003	−·00003	−·00007	−·00009	−·00010	−·00010	−·00010	−·00010	−·00009	−·00009
													WINTER MEANS.												
	−·00009	−·00009	−·00009	−·00009	−·00008	−·00007	−·00005	·00000	+·00008	+·00015	+·00022	+·00019	+·00021	+·00013	+·00005	+·00001	−·00003	−·00005	−·00006	−·00008	−·00008	−·00009	−·00009	−·00008	−·00007
													ANNUAL MEANS.												
	−·00010	−·00010	−·00010	−·00010	−·00009	−·00008	−·00007	−·00002	+·00006	+·00016	+·00023	+·00023	+·00023	+·00016	+·00008	+·00002	−·00003	−·00006	−·00008	−·00009	−·00009	−·00010	−·00009	−·00009	−·00008

Note.—When the sign is + the reading is above the mean.

TABLE XII.—**Hourly Means of the Horizontal Force in C. G. S. units (corrected for temperature) as determined from the selected quiet days in 1901.**

(*The Mean for the year* = 0·37434.)

Hours.	Preceding noon.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.	Succeeding noon.
	0·37000+																										
WINTER.																											
1901. Months.																											
January ...	443	429	427	428	429	430	430	430	436	440	444	448	451	447	442	439	435	433	431	428	429	428	426	426	424	424	452
February ...	458	424	427	427	428	429	430	433	436	442	451	456	460	453	445	437	434	434	432	432	431	431	430	431	431	432	459
March ...	458	421	422	422	423	423	424	426	432	443	457	465	467	461	450	442	437	432	430	428	427	426	426	426	426	425	460
October ...	446	420	420	420	420	419	420	421	425	433	445	451	455	450	440	431	427	424	421	419	418	417	418	419	419	420	451
November ...	440	417	418	419	422	421	422	423	429	437	443	445	444	441	434	427	423	421	420	419	417	416	416	417	418	419	443
December ...	444	431	432	431	431	431	432	435	441	449	456	460	459	454	447	440	436	435	432	432	431	431	431	430	431	432	457
Means ..	448	424	424	424	425	425	426	428	433	441	449	454	456	451	443	436	432	430	428	426	425	425	424	425	425	425	454
SUMMER.																											
April ...	465	424	424	424	425	425	426	426	426	436	449	459	463	460	454	444	437	432	430	427	425	424	423	422	424	424	466
May ...	457	429	429	429	430	432	429	431	436	445	455	463	468	464	455	446	437	431	429	428	428	428	428	428	428	429	468
June ...	457	428	428	428	429	429	428	430	435	443	454	463	465	461	454	445	436	430	427	427	427	427	428	429	430	432	462
July ...	465	435	435	434	434	434	434	437	445	453	463	471	474	471	464	454	442	434	431	431	433	433	434	435	436	436	474
August ...	448	419	422	422	422	422	423	426	432	439	448	454	455	453	447	439	432	427	424	424	423	424	424	425	426	426	462
September ...	452	426	425	426	427	427	427	426	427	434	446	455	457	456	449	442	436	433	432	430	429	429	428	427	428	428	462
Means ...	457	427	427	427	428	428	428	429	433	442	452	461	464	461	454	445	437	431	429	428	427	427	427	428	429	429	466

TABLE XIII.—**Diurnal Inequality of the Horizontal Force as deduced from Table XII.**

Hours.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.
SUMMER MEANS.																									
	−·00009	−·00009	−·00009	−·00008	−·00008	−·00008	−·00007	−·00003	+·00006	+·00016	+·00025	+·00028	+·00025	+·00018	+·00009	+·00001	−·00005	−·00007	−·00008	−·00009	−·00009	−·00009	−·00008	−·00007	−·00007
WINTER MEANS.																									
	−·00008	−·00008	−·00008	−·00007	−·00007	−·00006	−·00004	+·00001	+·00009	+·00017	+·00022	+·00024	+·00019	+·00011	+·00004	·00000	−·00002	−·00004	−·00006	−·00007	−·00007	−·00008	−·00007	−·00007	−·00007
ANNUAL MEANS.																									
	−·00009	−·00008	−·00008	−·00007	−·00007	−·00007	−·00005	−·00001	+·00007	+·00017	+·00023	+·00026	+·00022	+·00014	+·00006	·00000	−·00004	−·00006	−·00007	−·00008	−·00008	−·00008	−·00008	−·00007	−·00007

Note.—When the sign is + the reading is above the mean.

TABLE XIV.—Hourly Means of the Vertical Force in C. G. S. units (corrected for temperature) as determined from the selected quiet days in 1900.

(*The Mean for the year* = 0·14652.)

Hours.	Preceding noon.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.	Succeeding noon
	0·14000+																										
WINTER.																											
1900. Months.																											
January ...	600	612	612	612	612	611	611	611	614	620	614	601	597	603	607	606	610	612	610	612	612	612	612	612	612	613	599
February ...	624	630	630	629	629	629	629	629	629	631	626	616	608	615	622	627	628	628	625	626	627	627	628	629	629	629	615
March ...	619	635	635	634	634	633	634	635	637	631	624	616	610	613	624	633	636	634	632	632	632	632	633	633	633	633	617
October ...	670	683	683	683	683	682	683	684	688	681	668	662	662	671	679	684	684	682	679	680	680	681	682	682	683	683	670
Novemebr ...	682	688	688	687	687	687	686	685	685	685	681	677	680	685	689	686	684	684	685	686	687	687	688	688	688	688	683
December ...	692	691	691	691	691	691	691	688	689	692	691	691	691	692	695	694	693	692	691	690	691	691	691	691	692	692	689
Means ...	648	656	656	656	656	655	656	655	657	657	651	644	641	646	653	655	656	655	654	654	655	655	656	656	656	656	645
SUMMER.																											
April ...	614	639	639	639	638	638	638	643	642	633	624	615	614	617	625	632	639	641	638	634	635	636	637	638	639	639	620
May ...	629	643	643	642	642	642	644	649	643	633	625	619	620	626	634	642	646	648	646	641	641	641	642	643	643	643	625
June ...	628	643	643	643	643	643	645	651	646	641	632	625	627	632	631	635	640	642	641	640	641	642	643	644	644	644	631
July ...	628	650	651	650	650	650	654	658	654	645	636	628	626	630	639	647	653	656	654	648	648	649	650	651	651	652	633
August ...	653	668	668	668	668	668	672	676	674	662	653	645	643	650	658	665	671	672	668	662	663	664	657	666	667	667	647
September ...	666	682	682	682	682	682	684	689	685	672	661	651	650	660	671	679	683	682	677	675	676	677	678	679	679	680	665
Means ...	636	654	654	654	654	654	656	661	657	648	638	630	630	636	643	650	655	657	654	650	651	651	651	653	654	654	637

TABLE XV.—Diurnal Inequality of the Vertical Force as deduced from Table XIV.

Hours.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.
SUMMER MEANS.																									
	+·00004	+·00004	+·00004	+·00004	+·00004	+·00006	+·00011	+·00007	−·00002	−·00012	−·00020	−·00020	−·00014	−·00007	·00000	+·00005	+·00007	+·00004	·00000	+·00001	+·00001	+·00001	+·00003	+·00004	+·00004
WINTER MEANS.																									
	+·00002	+·00002	+·00002	+·00002	+·00001	+·00002	+·00001	+·00003	+·00003	−·00003	−·00010	−·00013	−·00008	−·00001	+·00001	+·00002	+·00001	·00000	·00000	+·00001	+·00001	+·00002	+·00002	+·00002	+·00002
ANNUAL MEANS.																									
	+·00003	+·00003	+·00003	+·00003	+·00003	+·00004	+·00006	+·00005	·00000	−·00007	−·00015	−·00016	−·00011	−·00004	·00000	+·00004	+·00004	+·00002	·00000	+·00001	+·00001	+·00001	+·00003	+·00003	+·00003

Note.—When the sign is + the reading is above the mean.

TABLE XVI.—Hourly Means of the Vertical Force in C. G. S. units (corrected for temperature) as determined from the selected quiet days in 1901.

(*The Mean for the year* = 0·14752)

Hours.	Preceding noon.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.	Succeeding noon.
	0·14000+																										
WINTER.																											
1901, Months.																											
January ...	709	713	712	713	713	712	712	712	712	718	718	713	709	712	714	711	709	711	713	714	714	713	713	713	713	714	712
February ...	715	716	716	716	715	714	714	714	716	719	718	714	711	712	716	717	715	712	711	713	714	715	715	715	715	715	703
March ...	707	722	722	722	722	721	722	722	725	722	716	710	708	714	722	729	731	726	720	719	720	720	720	720	721	721	709
October ..	761	774	774	773	773	773	773	775	777	772	777	760	757	764	770	774	774	771	769	771	772	772	772	774	773	774	763
November ...	778	785	785	785	784	784	785	784	785	780	775	771	772	781	787	785	783	785	785	784	784	785	785	786	786	786	781
December ...	793	796	796	795	795	795	795	794	795	796	796	795	793	794	795	791	792	793	794	794	794	795	795	795	795	796	795
Means ...	744	751	751	751	750	750	750	750	752	751	750	744	742	746	751	751	751	750	749	749	750	750	750	750	750	751	744
SUMMER.																											
April	717	731	731	730	730	729	730	734	732	725	714	707	707	712	719	726	732	733	730	729	728	729	730	730	731	731	714
May	730	746	746	745	745	746	748	753	750	741	728	721	722	728	736	743	746	746	746	744	744	744	745	746	746	745	732
June	745	757	757	756	756	756	760	763	759	751	744	738	735	739	746	752	759	760	758	754	755	756	756	757	757	758	741
July	742	763	763	762	763	763	765	769	770	761	753	750	750	754	760	766	767	767	766	762	761	762	763	764	764	764	758
August ..	759	769	769	769	770	770	773	777	776	770	762	754	751	755	761	766	772	773	770	766	767	768	768	769	769	770	762
September ..	758	778	778	778	778	778	779	784	783	772	760	750	750	757	770	781	786	784	778	774	775	775	777	778	778	778	754
Means ...	742	757	757	757	757	757	759	763	762	753	743	737	736	741	749	756	760	760	758	755	755	756	756	757	757	758	743

TABLE XVII.—Diurnal Inequality of the Vertical Force as deduced from Table XVI.

Hours.	Mid.	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid.
SUMMER MEANS.																									
	+·00003	+·00003	+·00003	+·00003	+·00003	+·00005	+·00009	+·00008	−·00001	−·00011	−·00017	−·00018	−·00013	−·00005	+·00002	+·00006	+·00006	+·00004	+·00001	+·00001	+·00002	+·00002	+·00003	+·00003	+·00004
WINTER MEANS.																									
	+·00001	+·00001	+·00001	·00000	·00000	·00000	·00000	+·00002	+·00001	·00000	−·00006	−·00008	−·00004	+·00001	+·00001	+·00001	·00000	−·00001	−·00001	·00000	·00000	·00000	·00000	·00000	+·00001
ANNUAL MEANS.																									
	+·00002	+·00002	+·00002	+·00002	+·00001	+·00003	+·00005	+·00005	·00000	−·00005	−·00012	−·00013	−·00009	−·00002	+·00001	+·00003	+·00003	+·00001	·00000	·00000	+·00001	+·00001	+·00002	+·00002	+·00002

Note.—When the sign is + the reading is above the mean.

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